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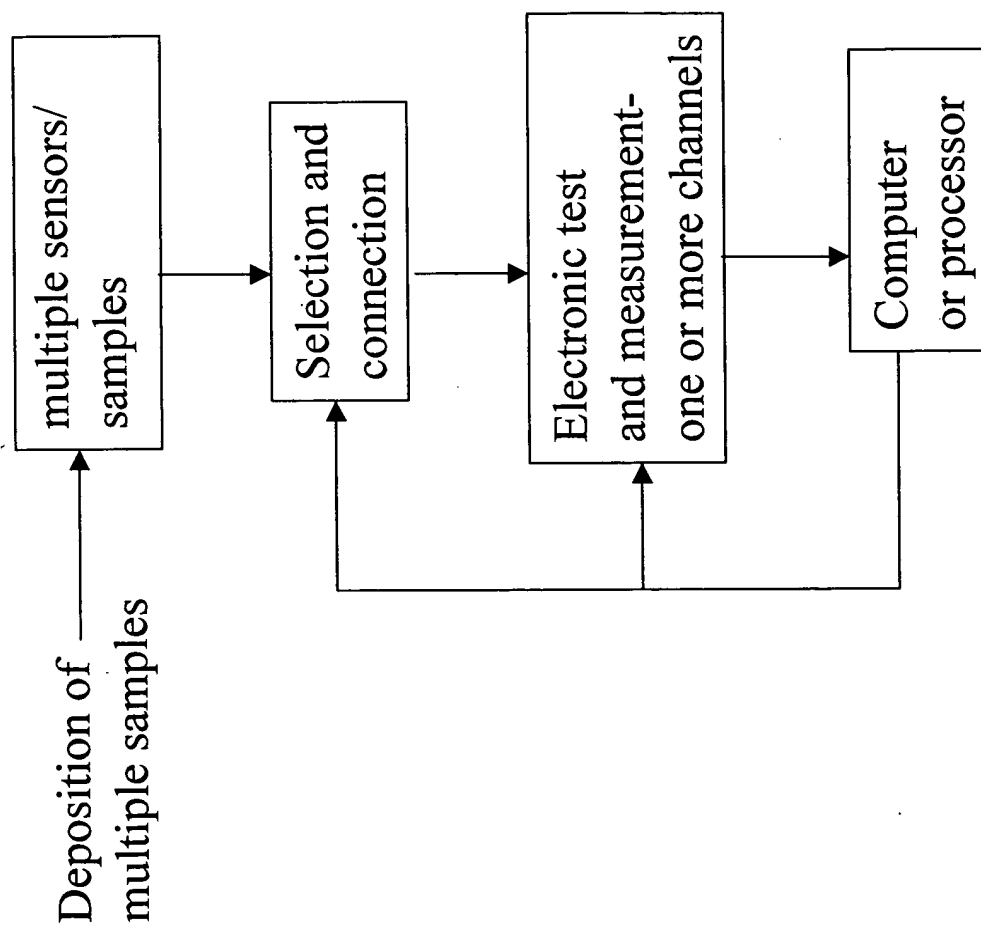
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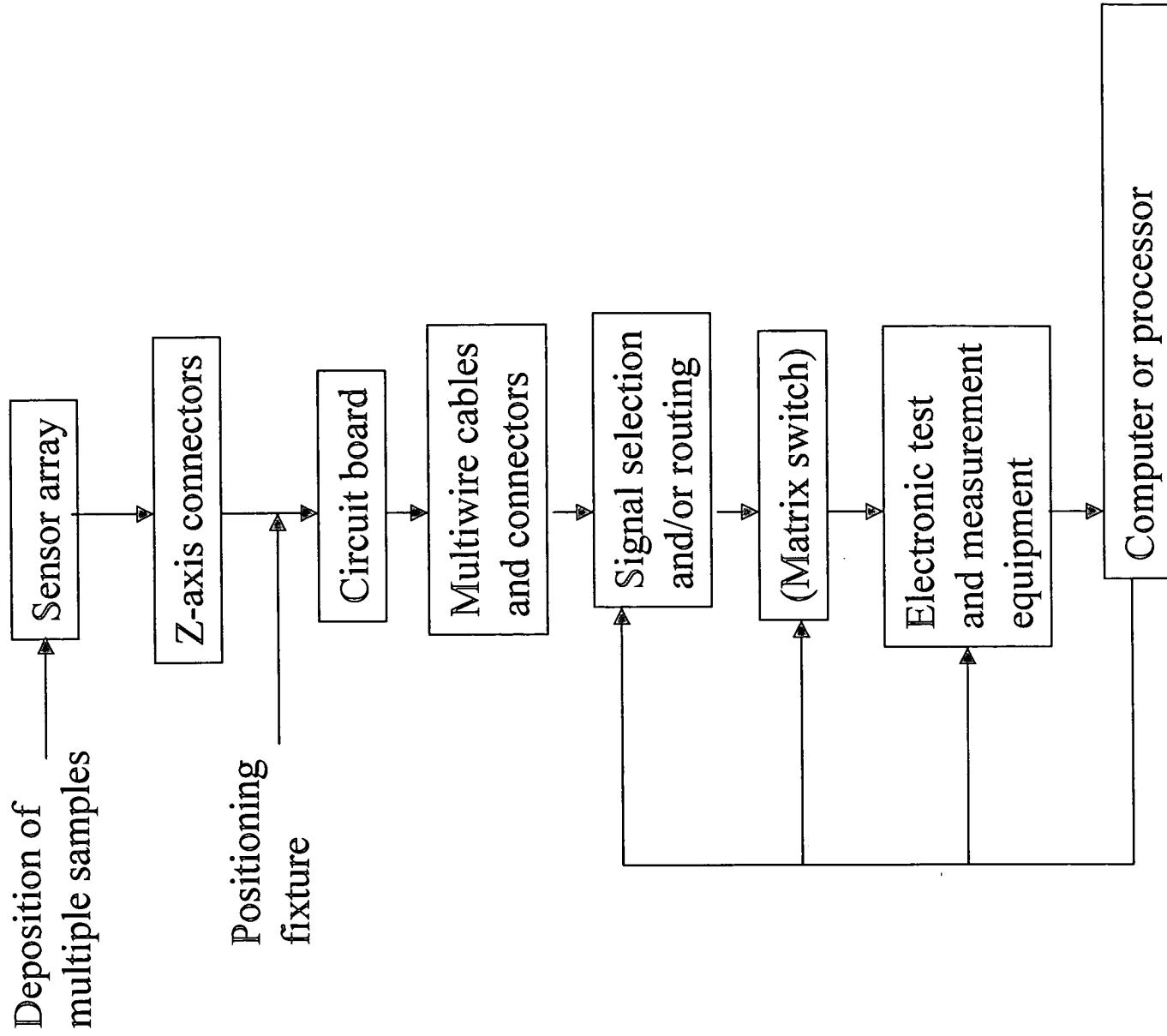
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Generic system concept



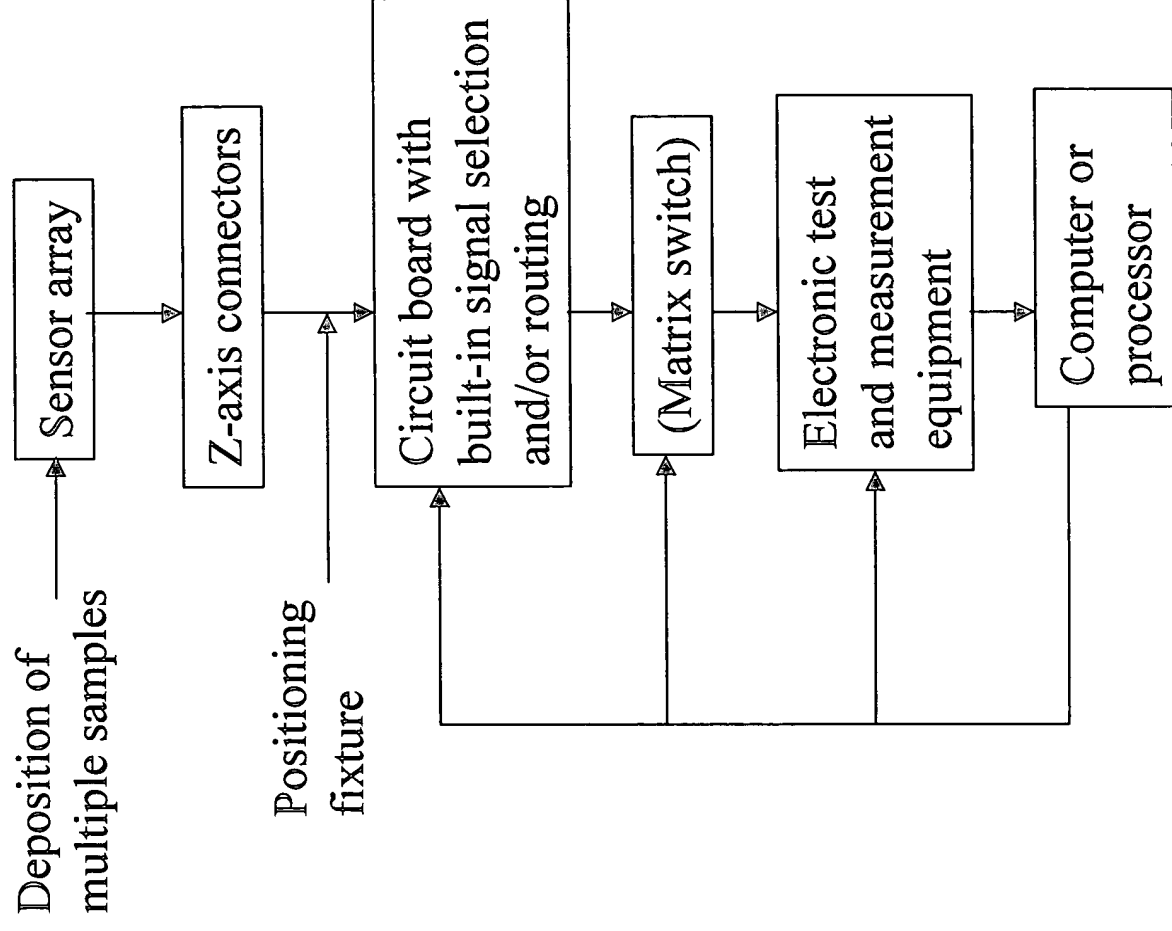
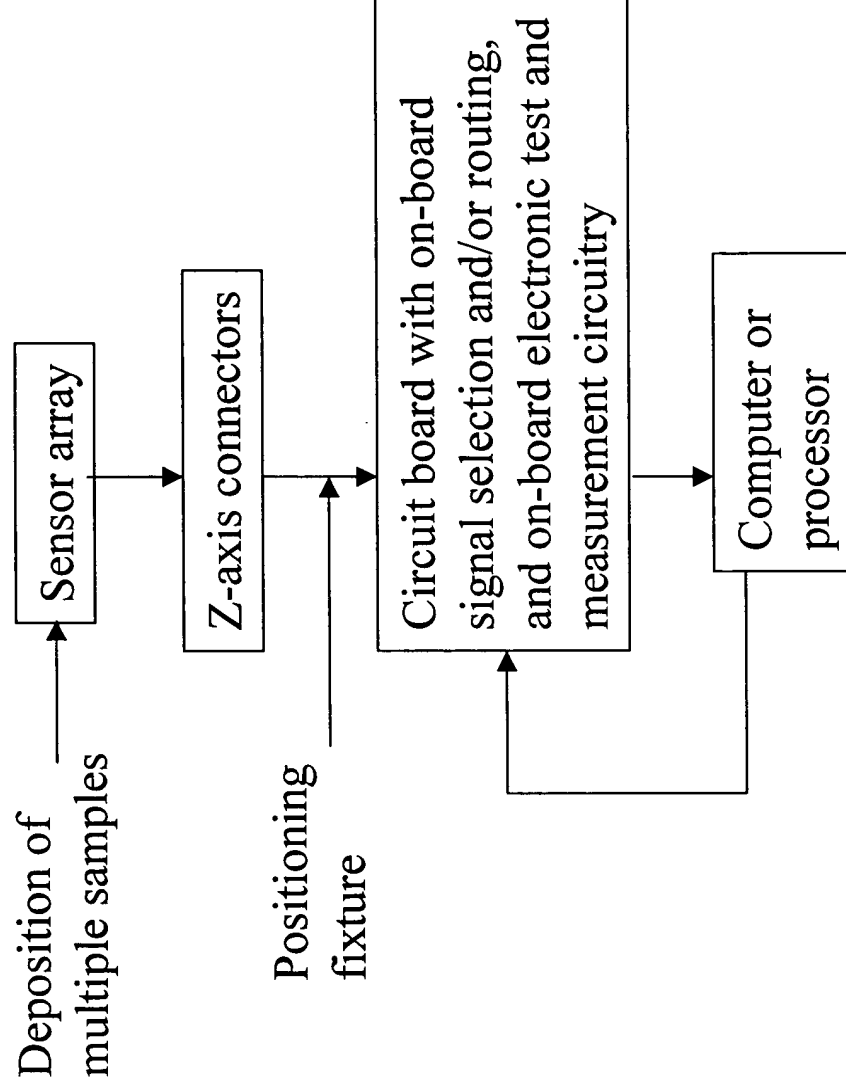


FIG 1C



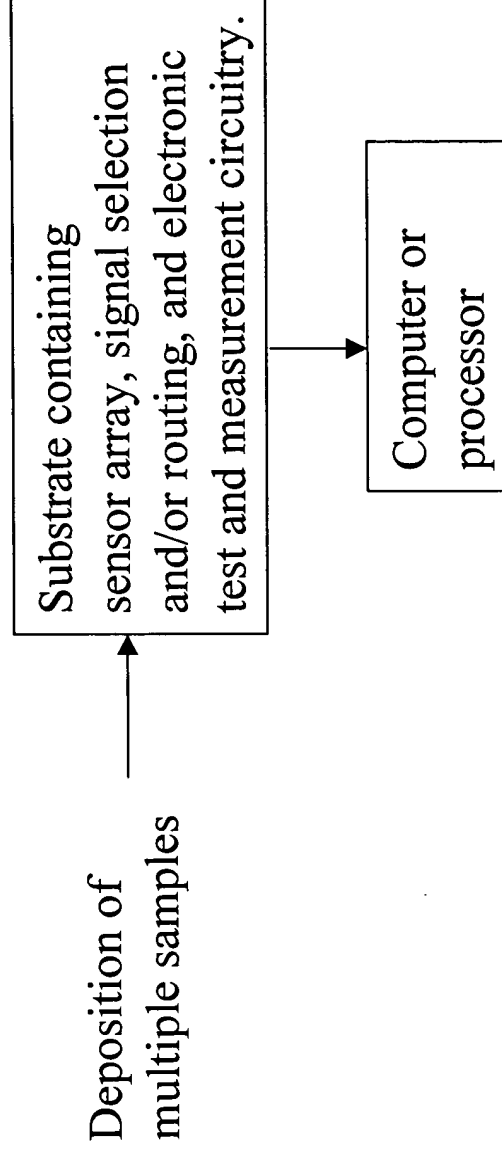


FIG. 1E

09210435-121.93

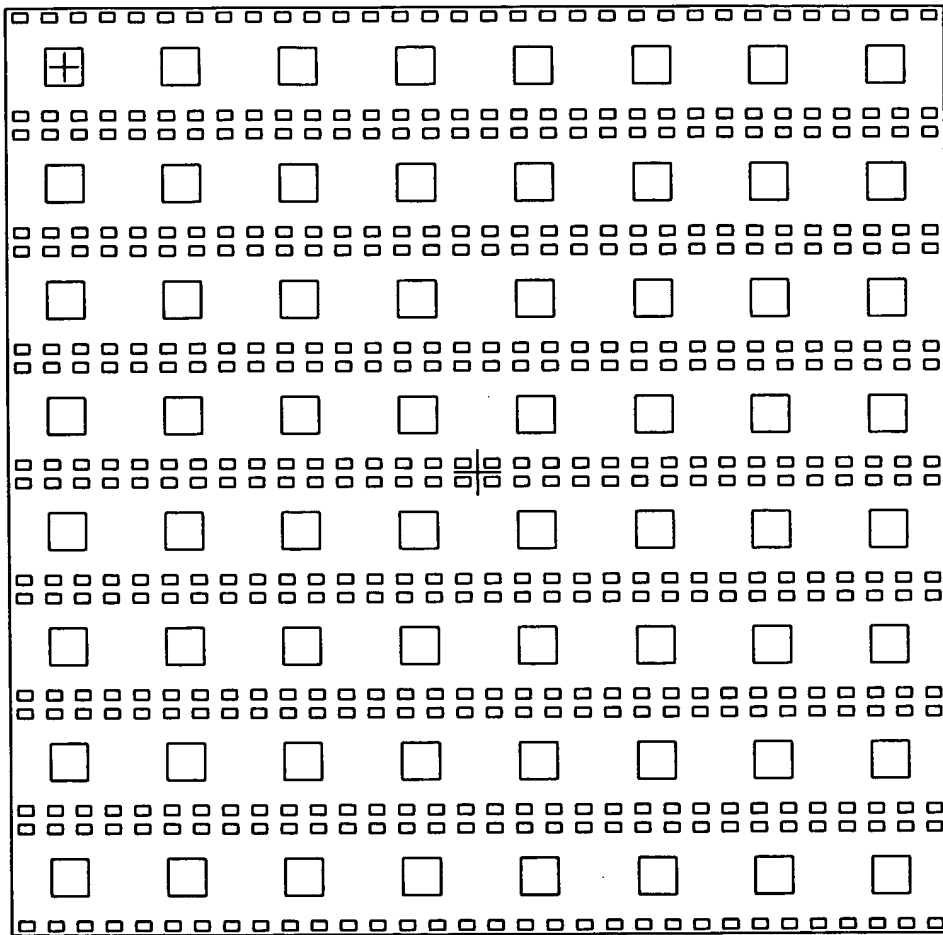


FIG 2A

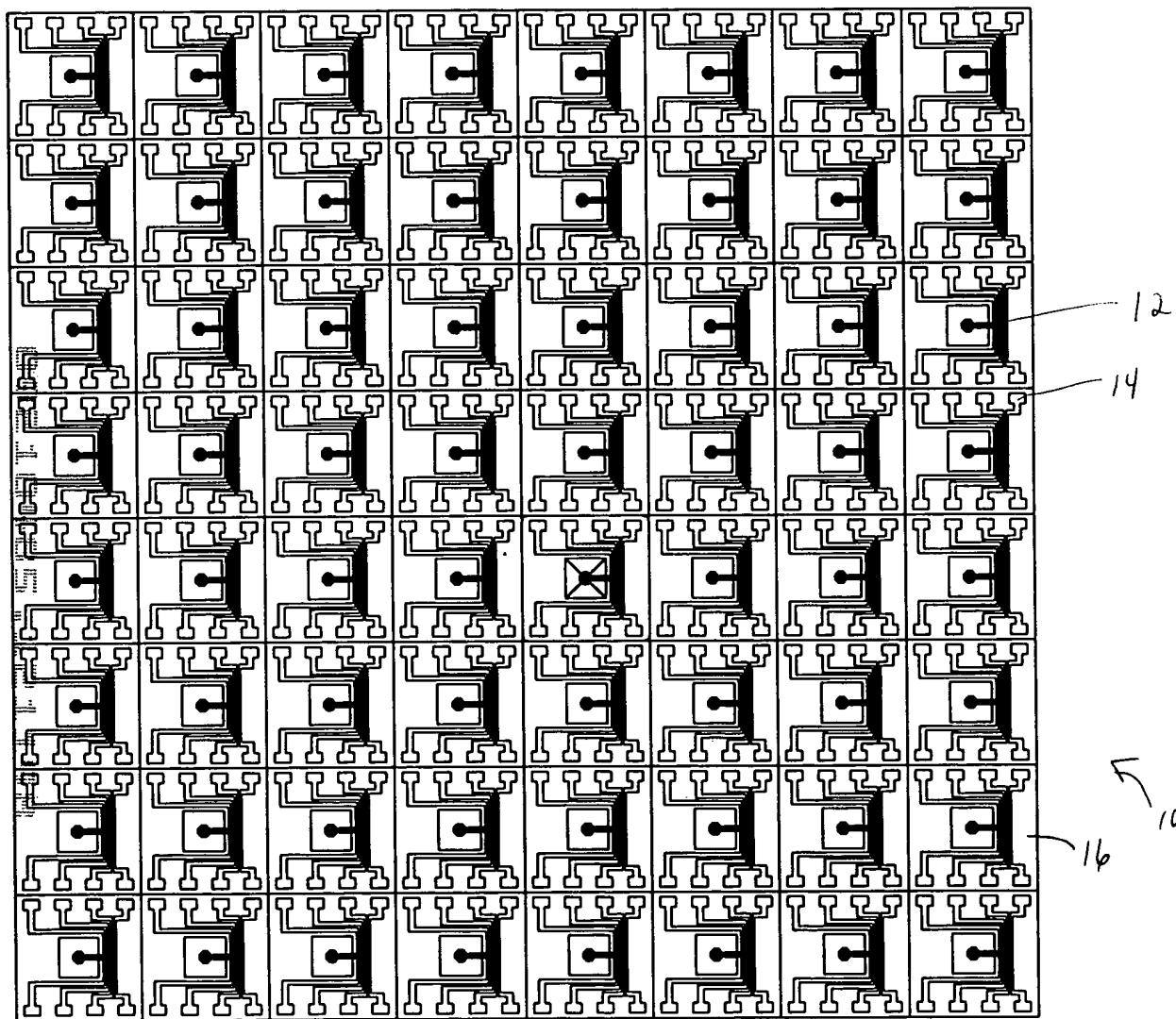


FIG 2B.

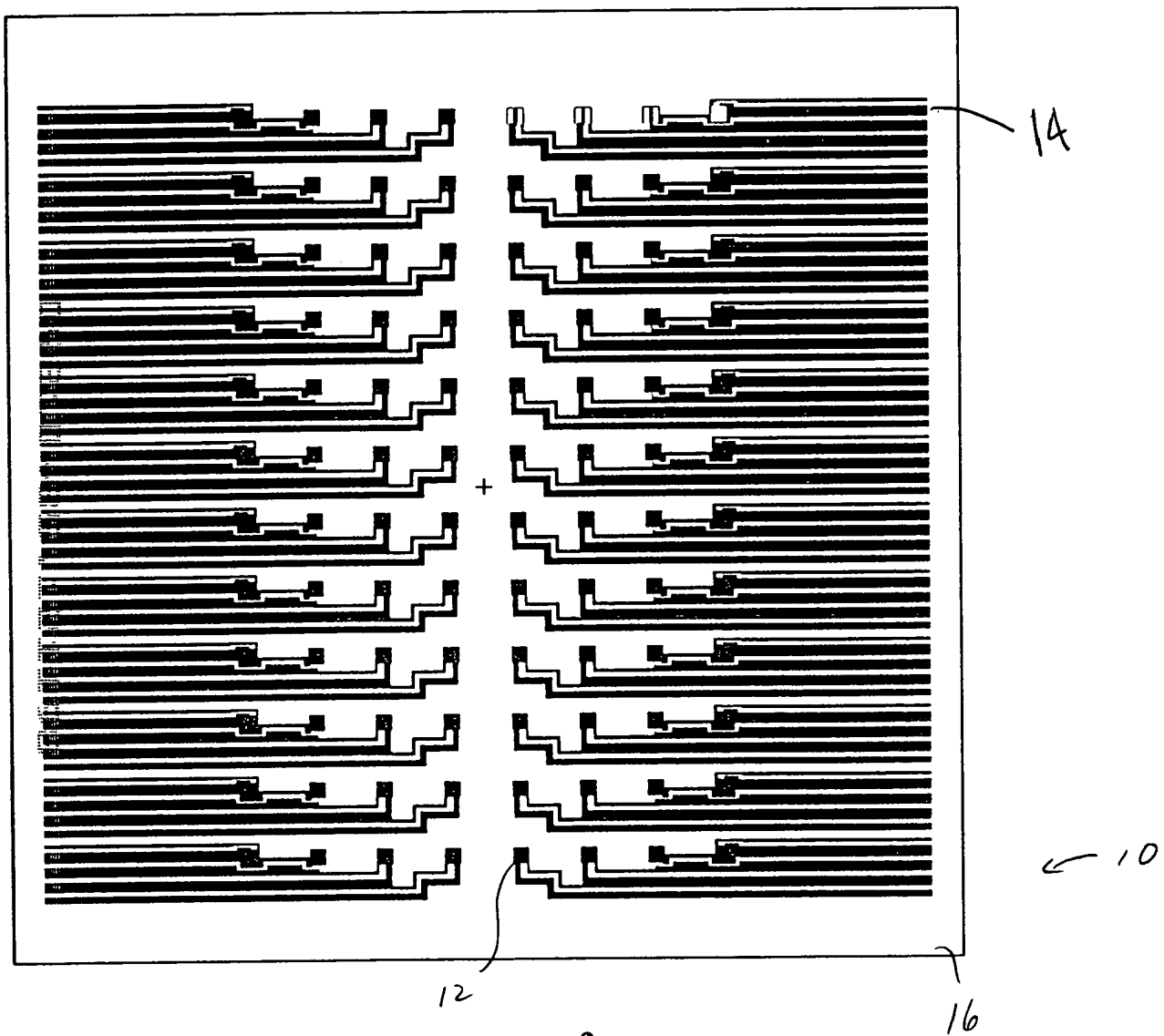


FIG 2C

$$(1, 1)$$

FIG 2D

FIG 3A

SECRET

TOP INNER CHD1 INNER3 CHD2 SIDE 24 BOTTOM

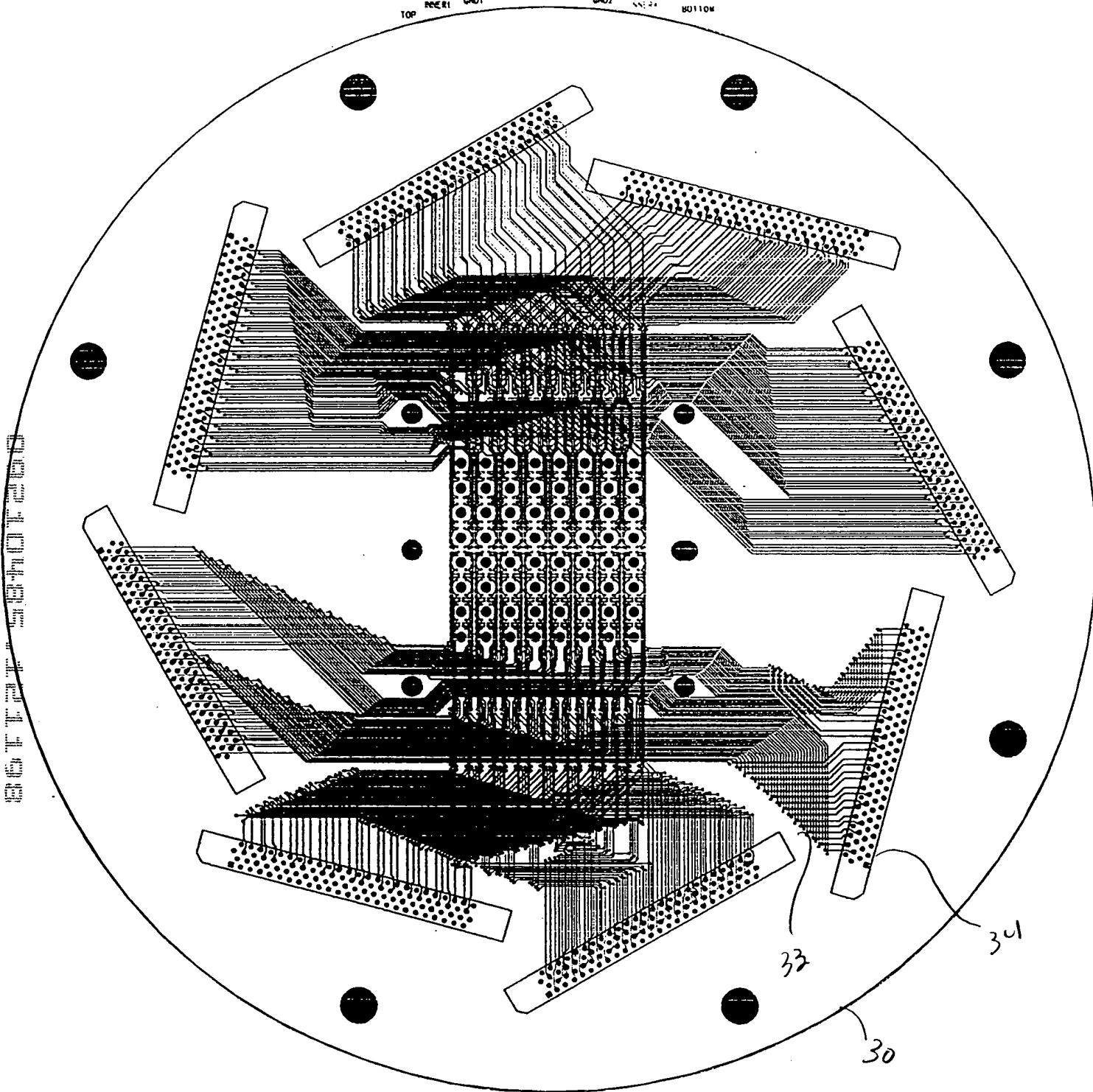


FIG 3B

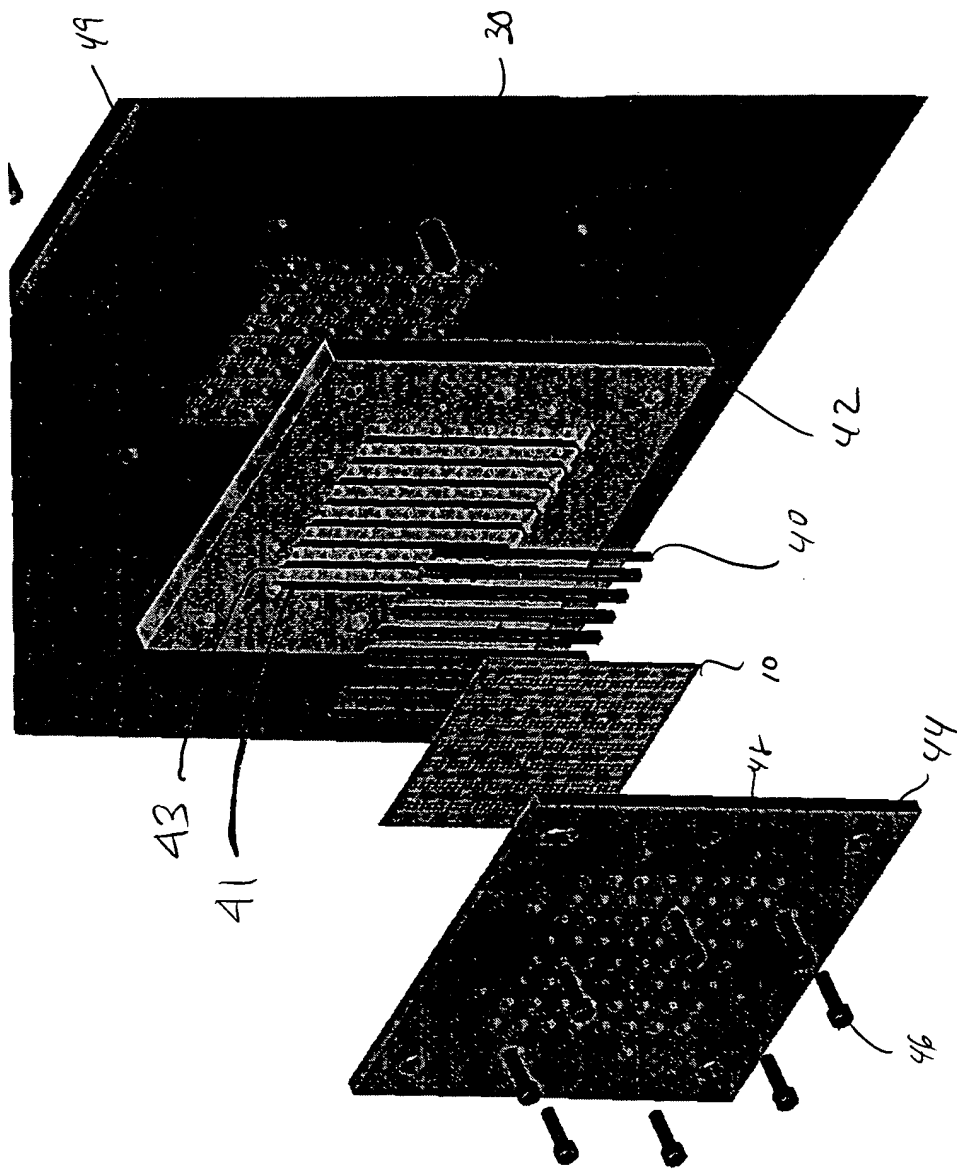
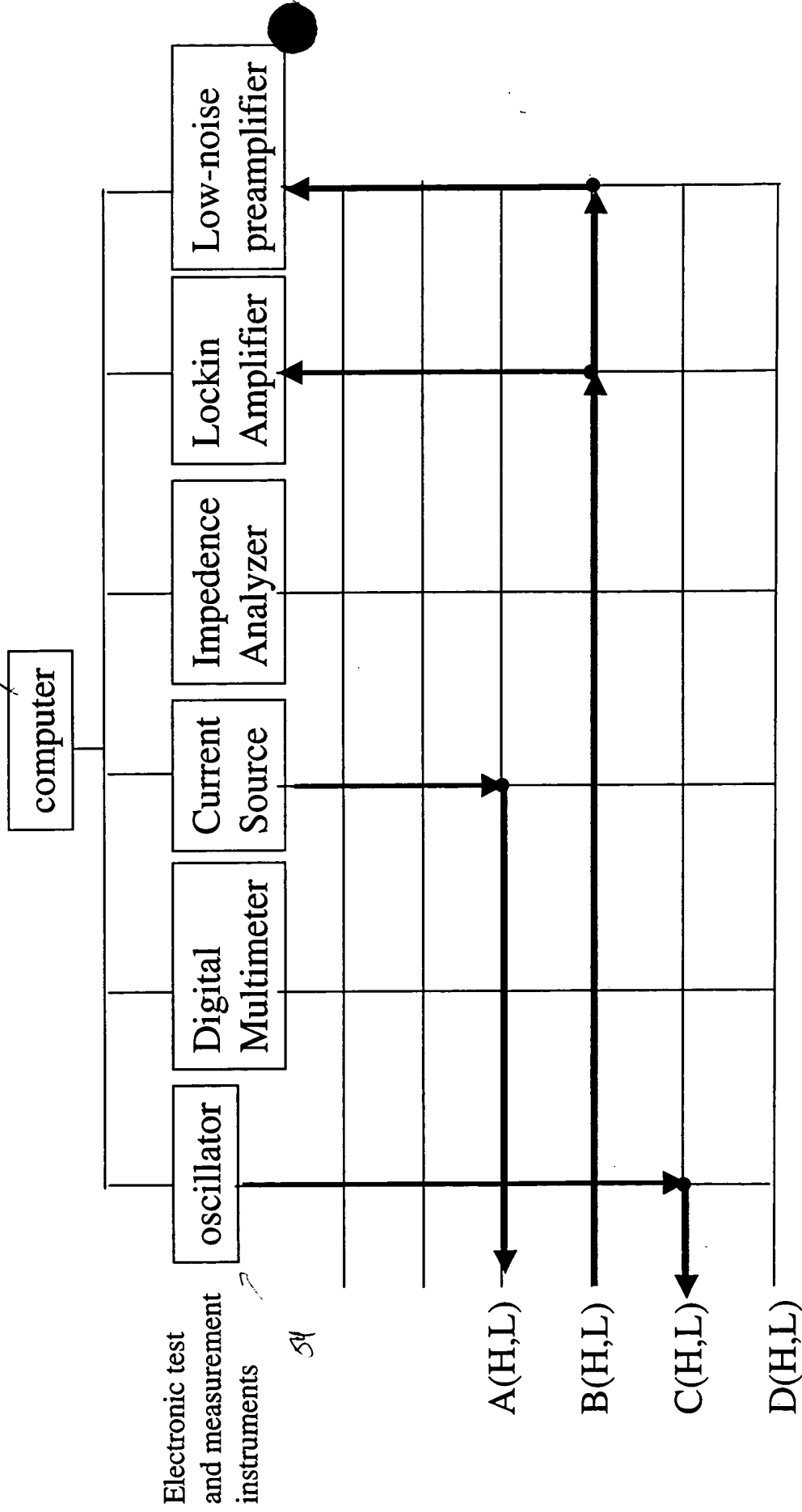


FIG 4

52



Multiplexer
outputs

The computer also controls the multiplexer
and the matrix switch.

Fig 5

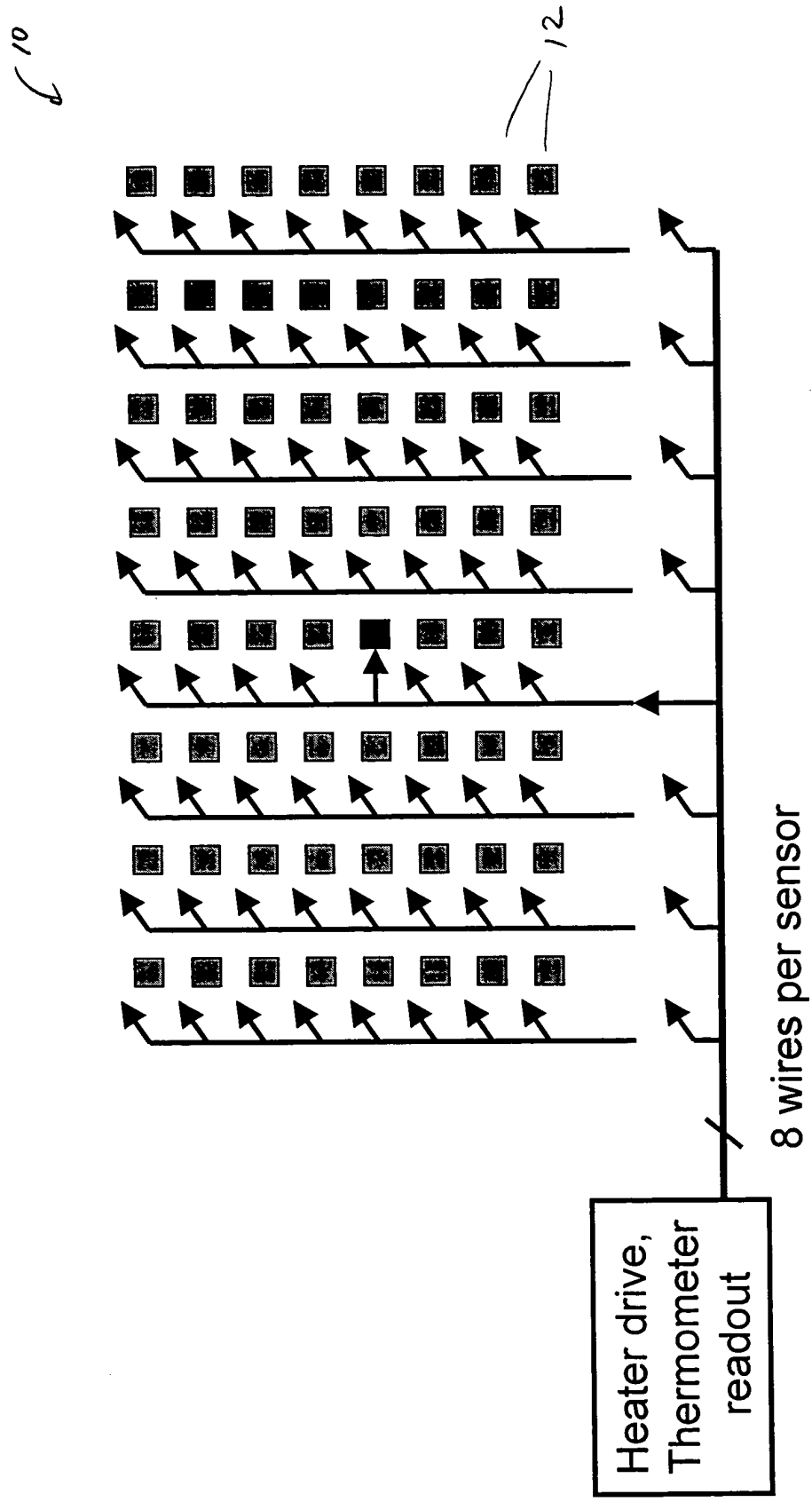


Fig. 6A

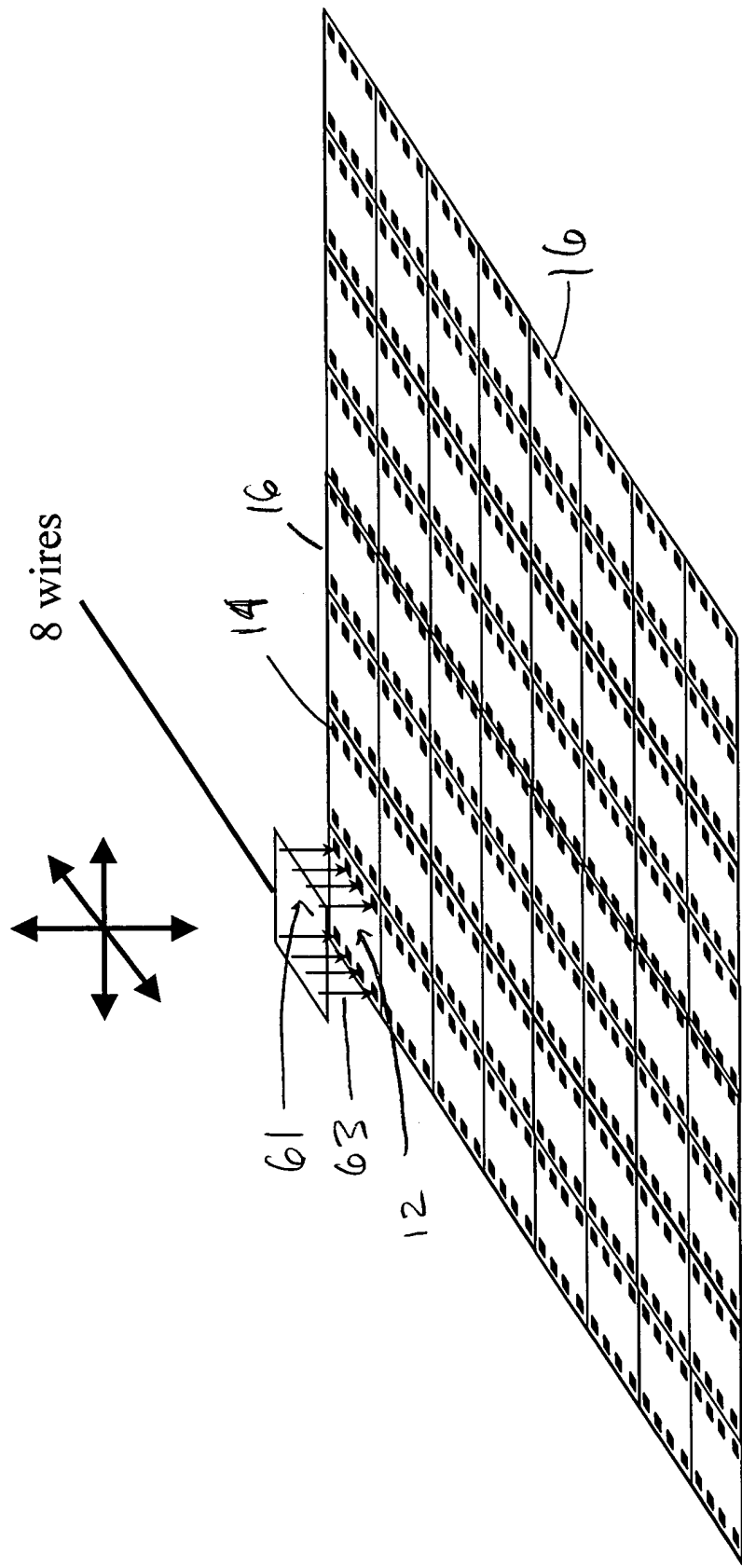


FIGURE 6B

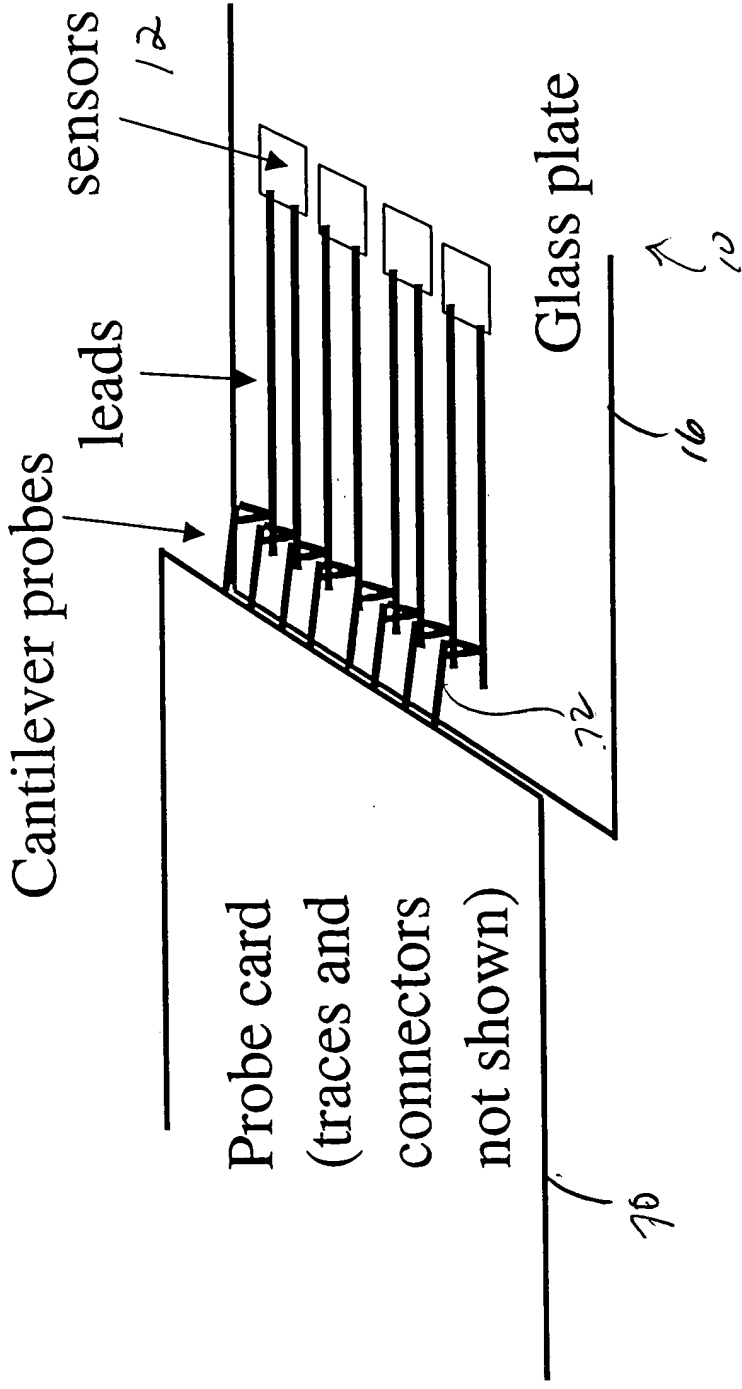
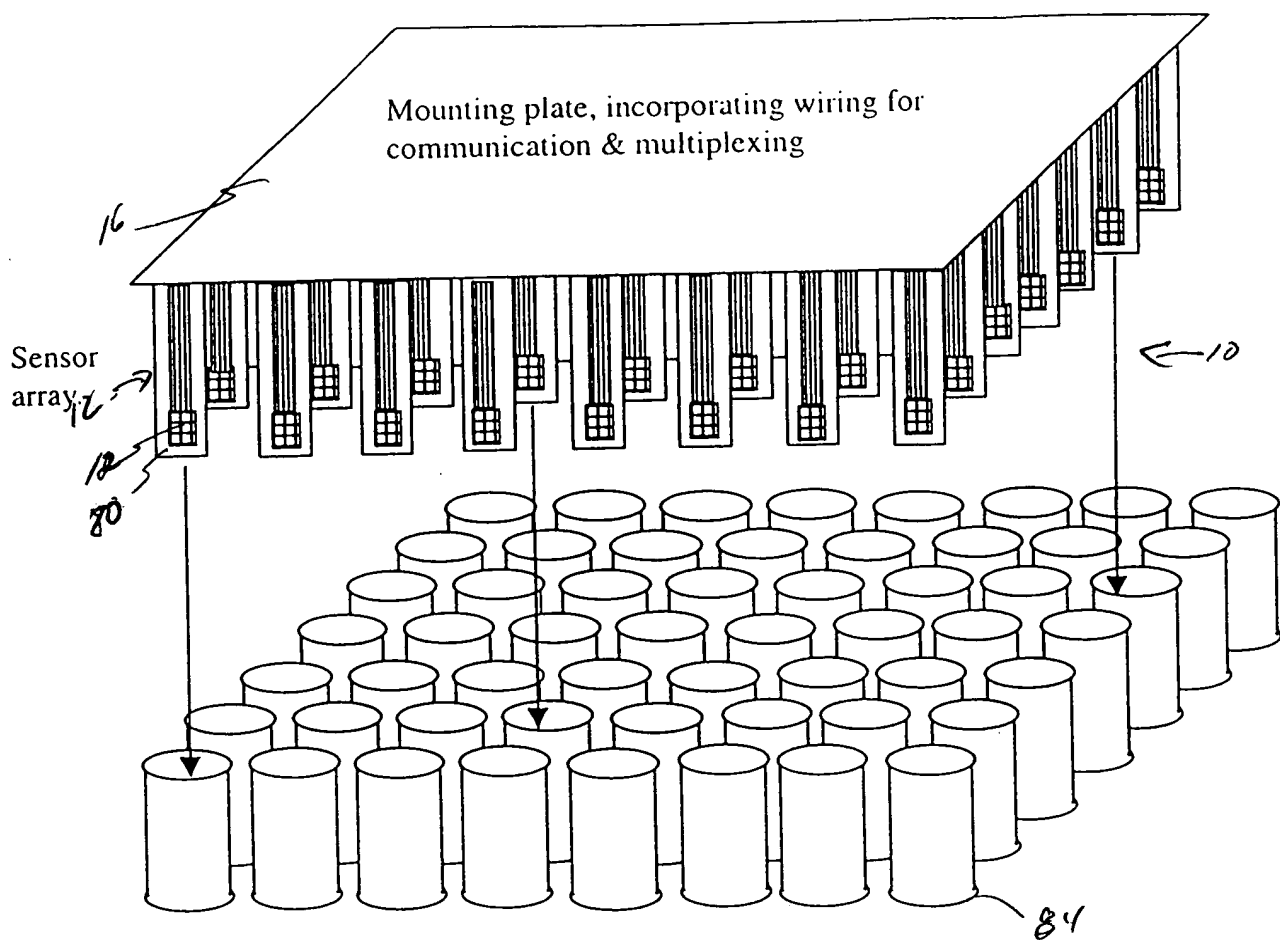


FIG 7

CONFIDENTIAL - 12.1.98



Array of vessels containing different solutions

FIG. 8

Measurements are made either 1) on solutions, using immersed sensors; or 2) on dried films deposited on the sensors by dipping, removing, and drying.

CONFIDENTIAL INFORMATION
Symyx Technologies, April 13, 1998

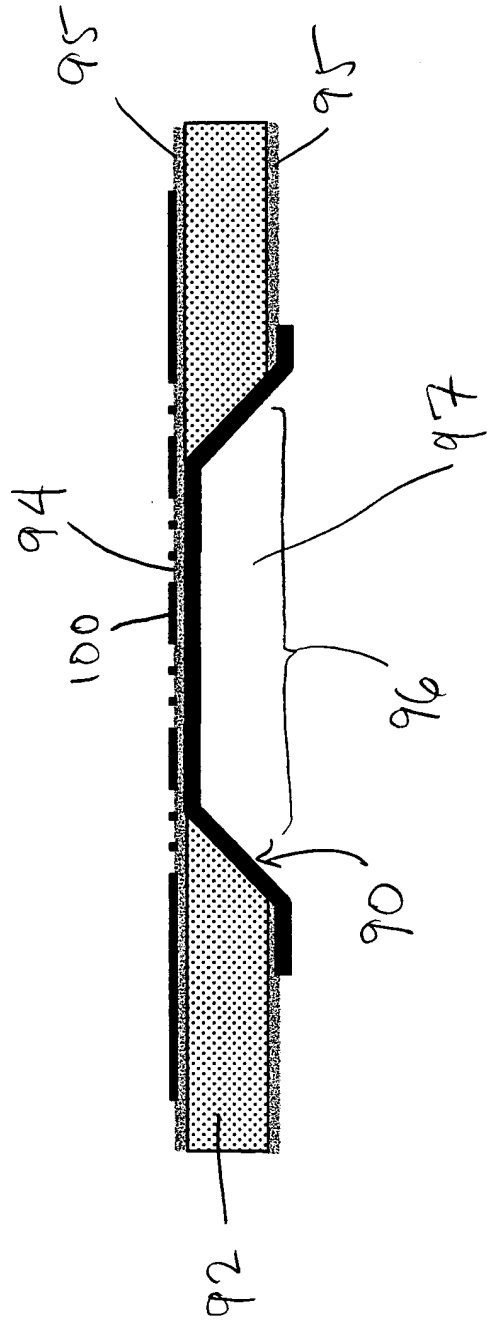


FIG. 9A

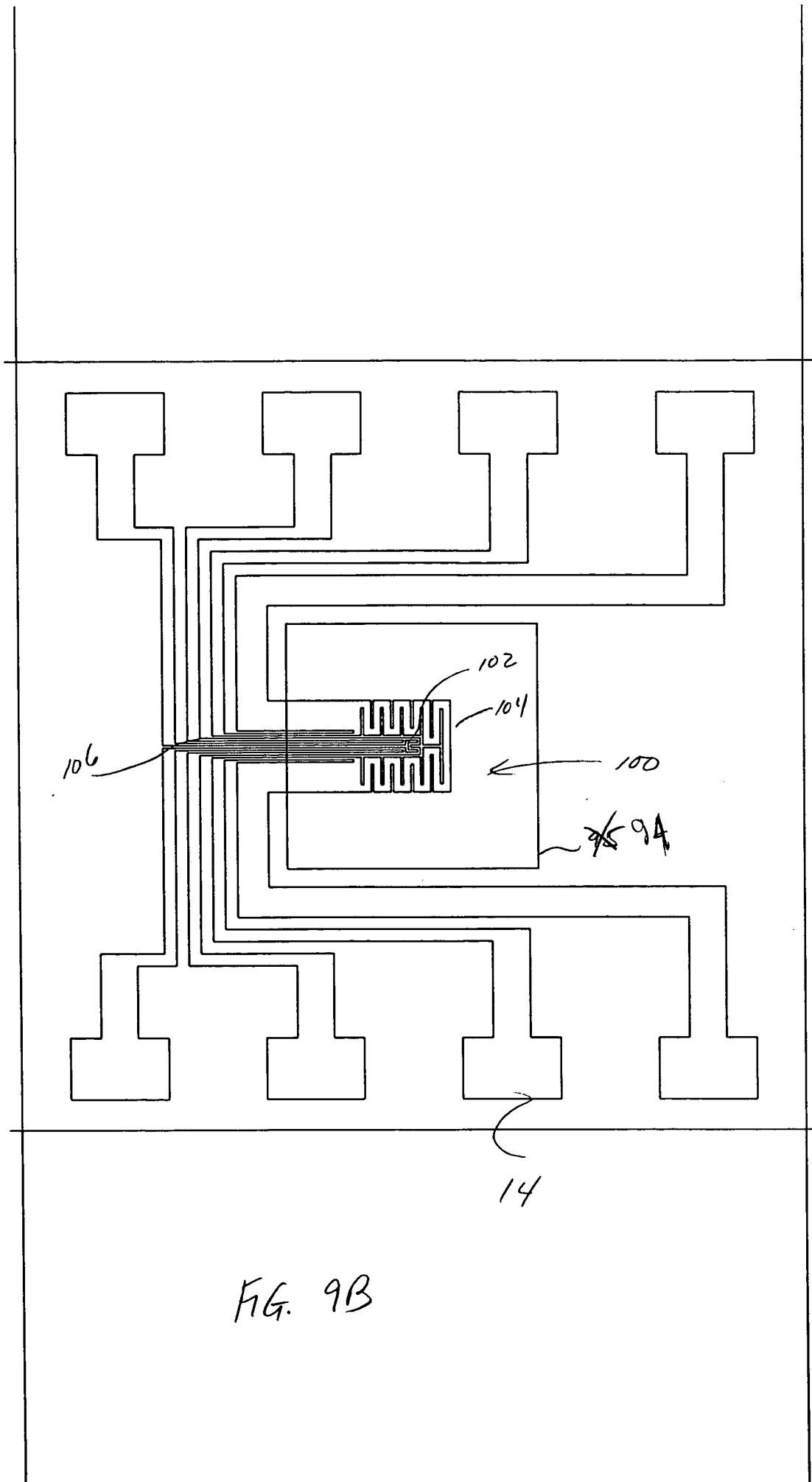


FIG. 9B

FIG. 9C

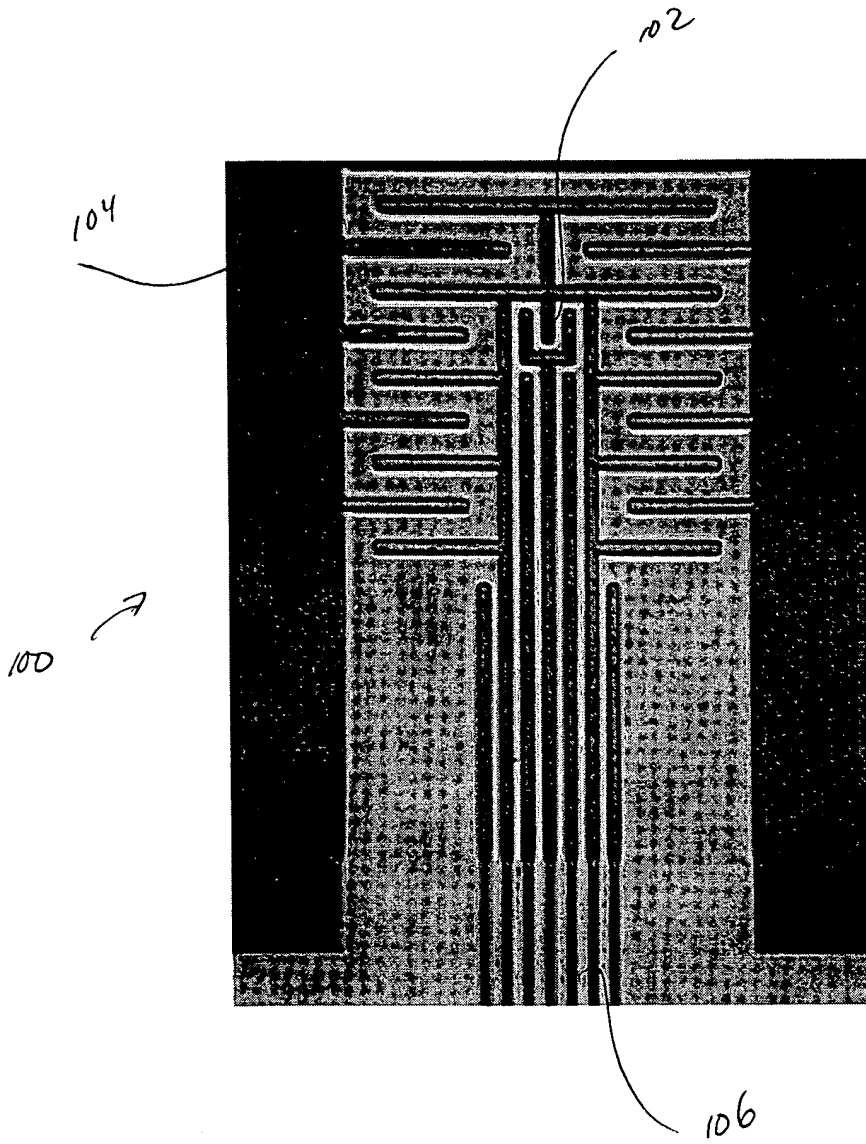


FIG 9C

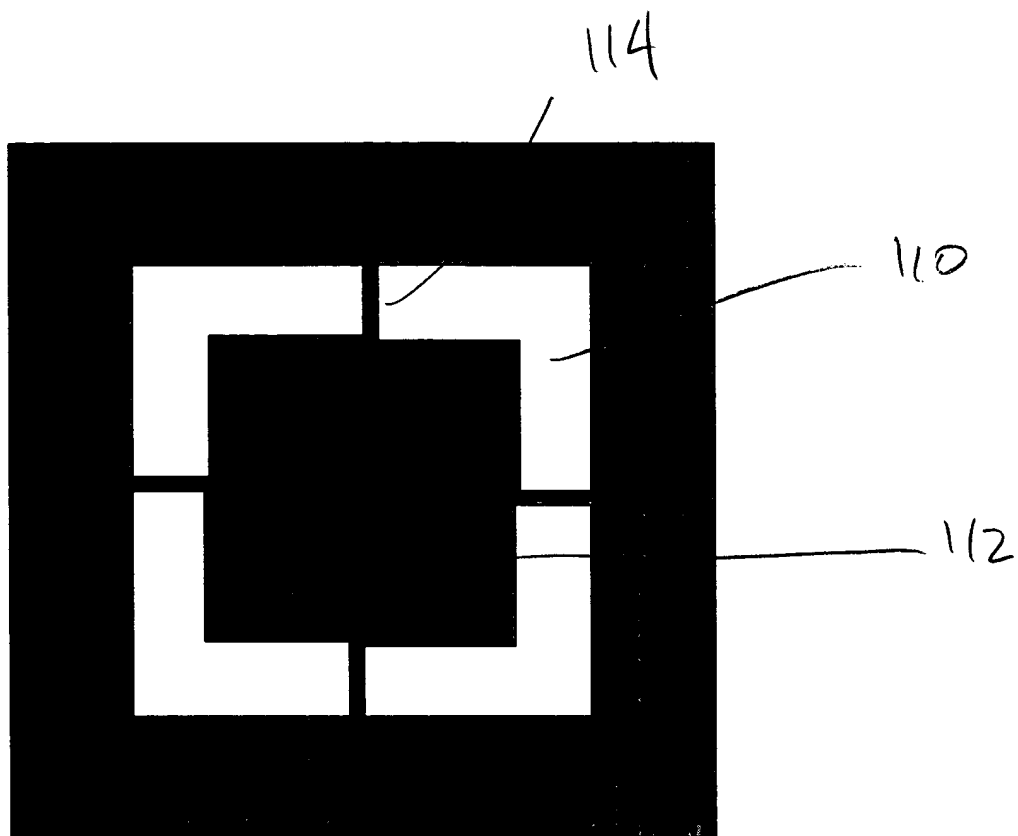


FIG. 10

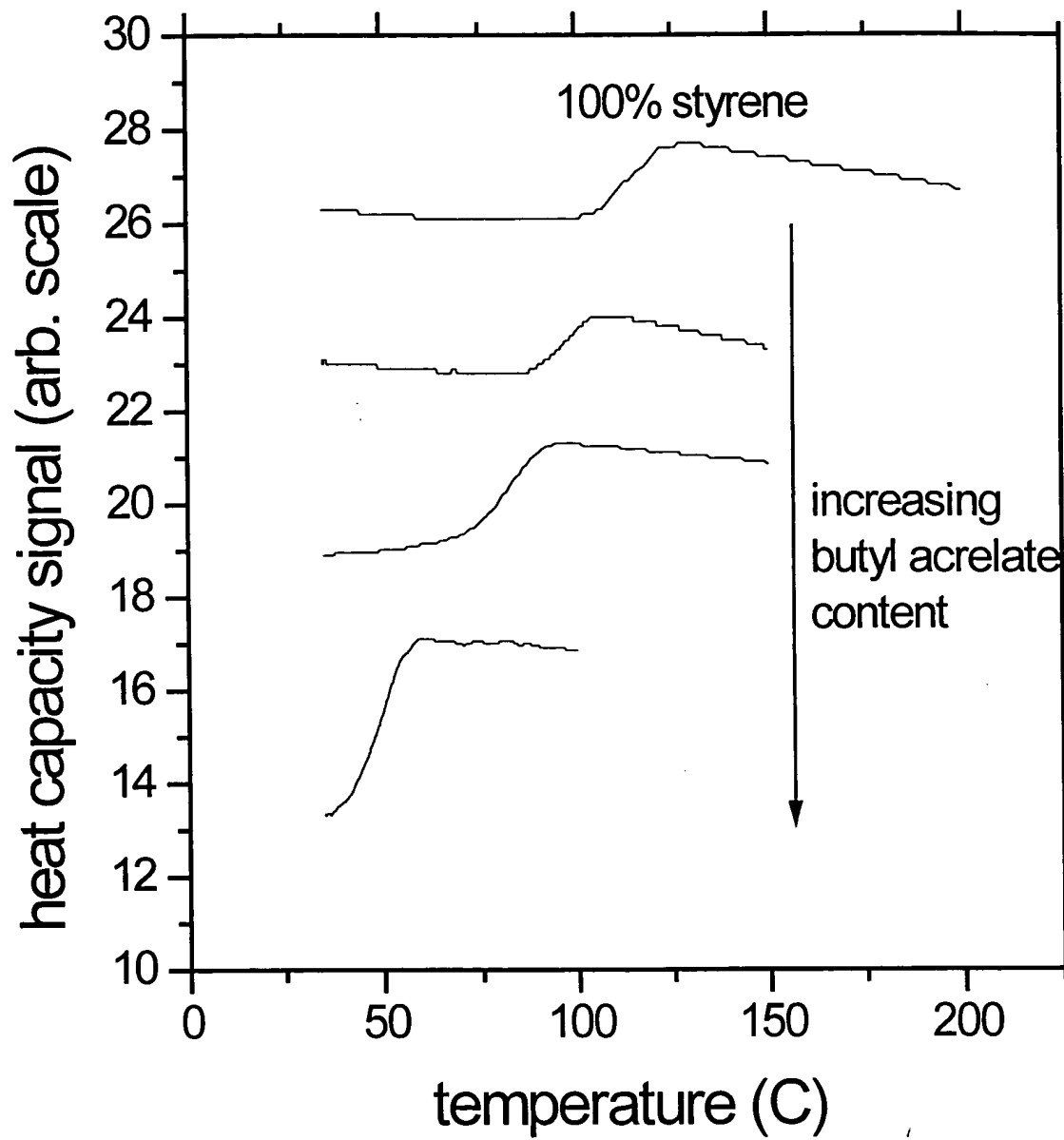
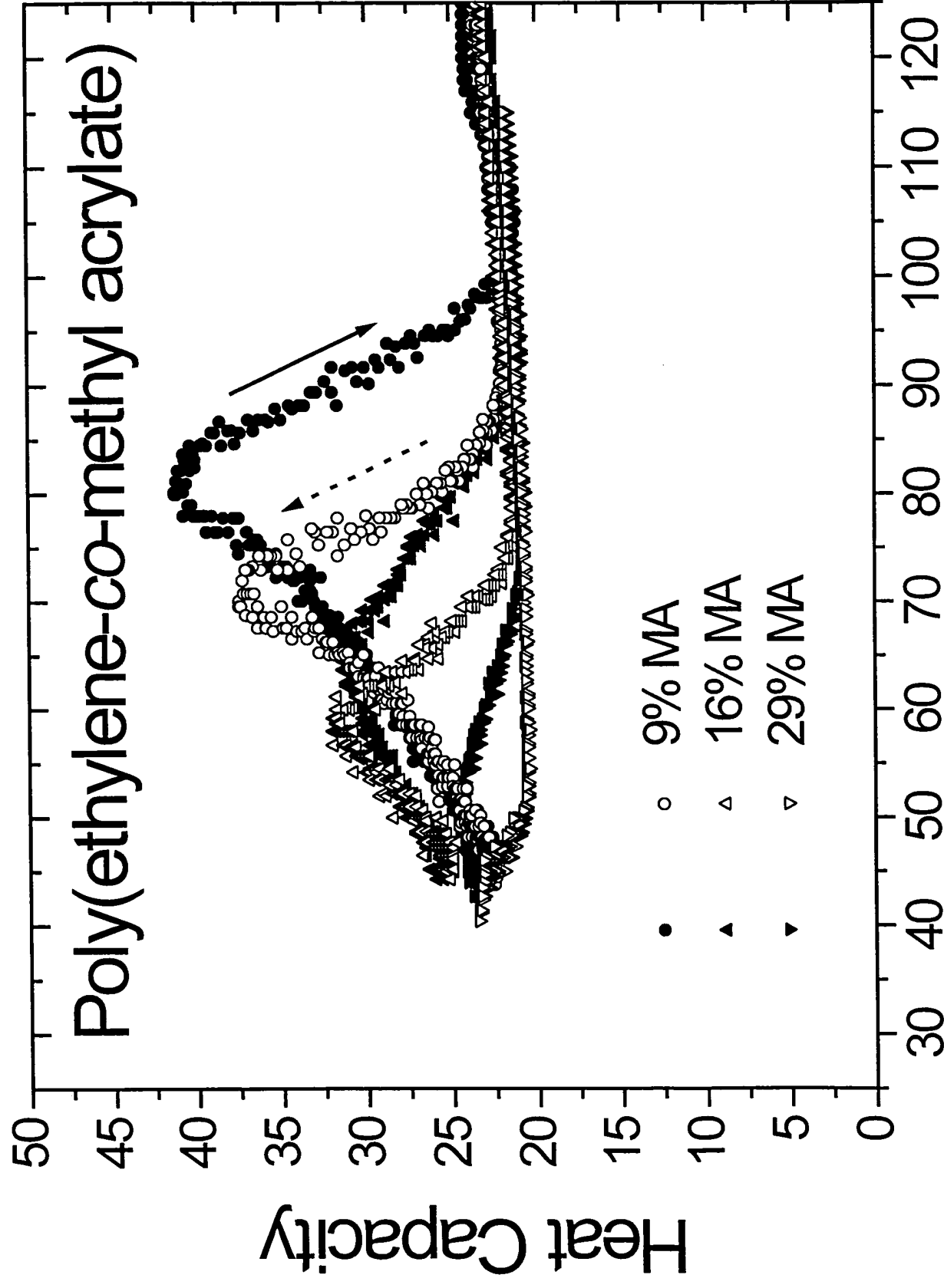
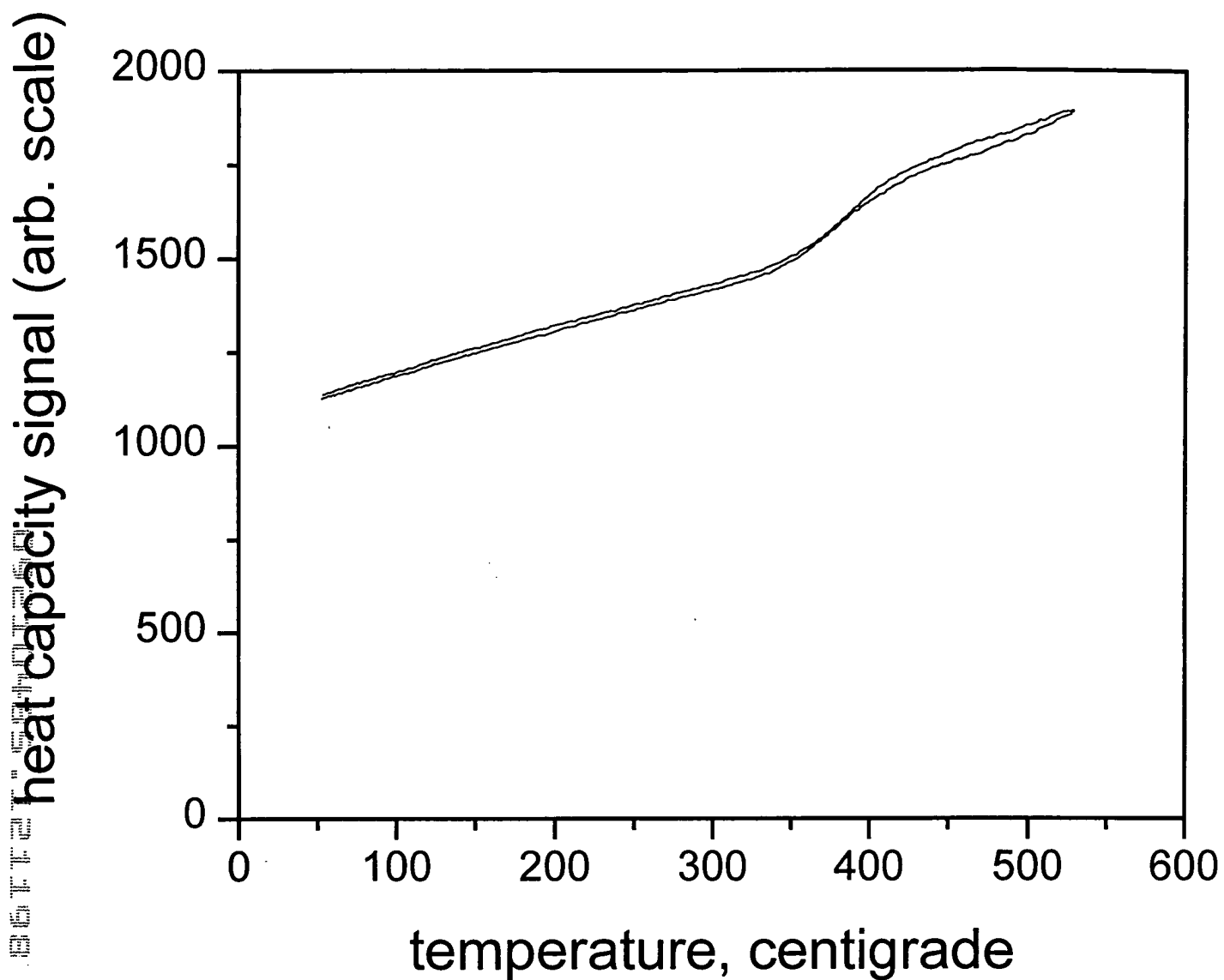


FIG 11A



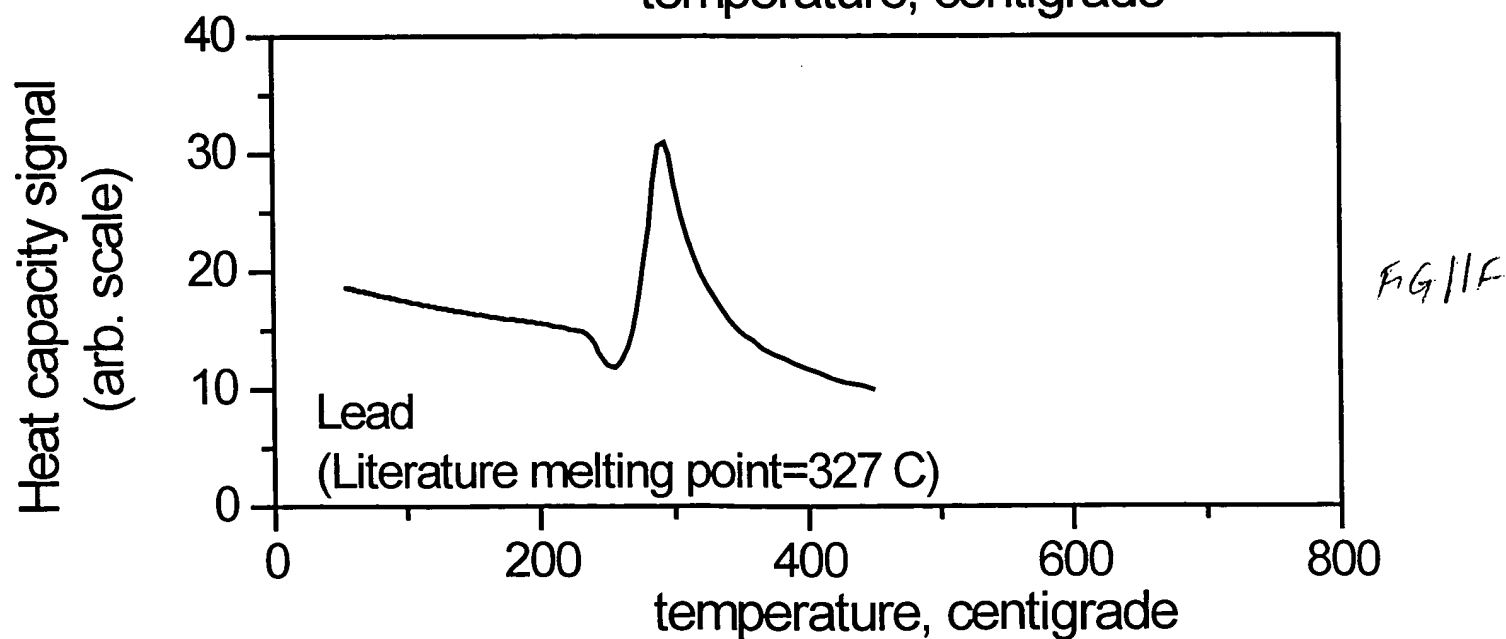
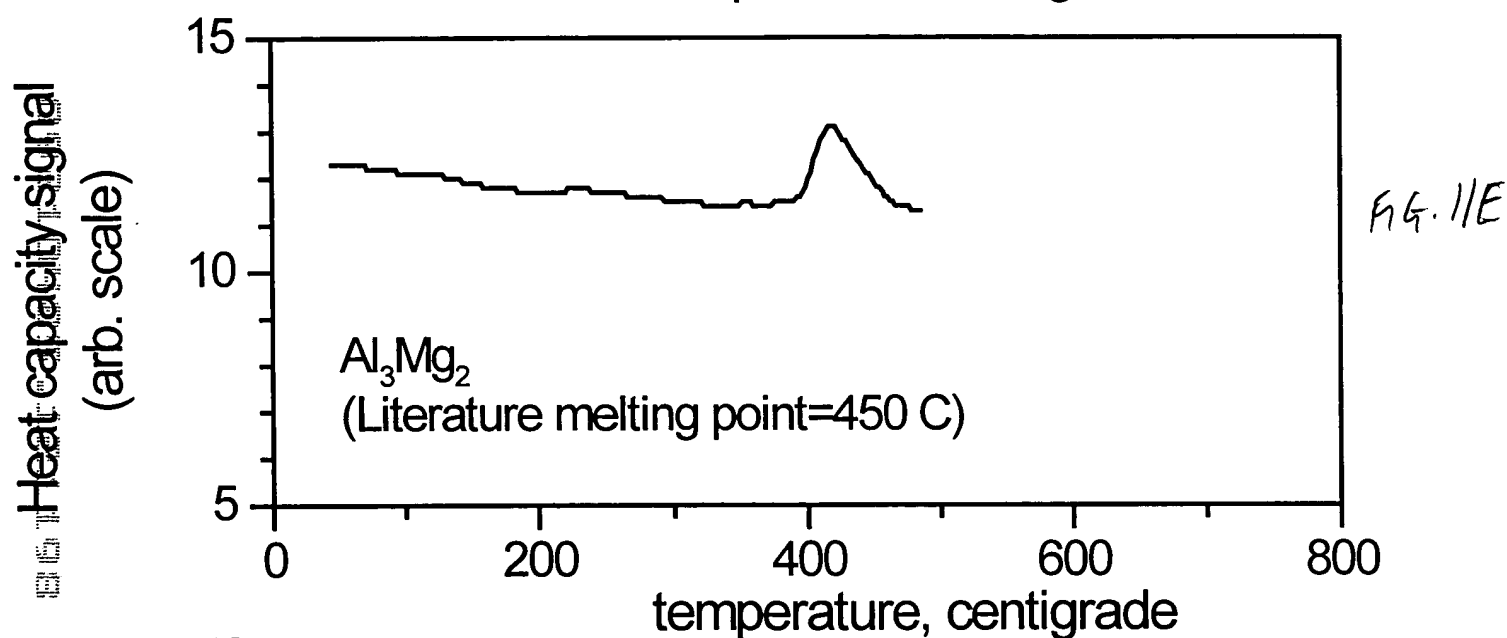
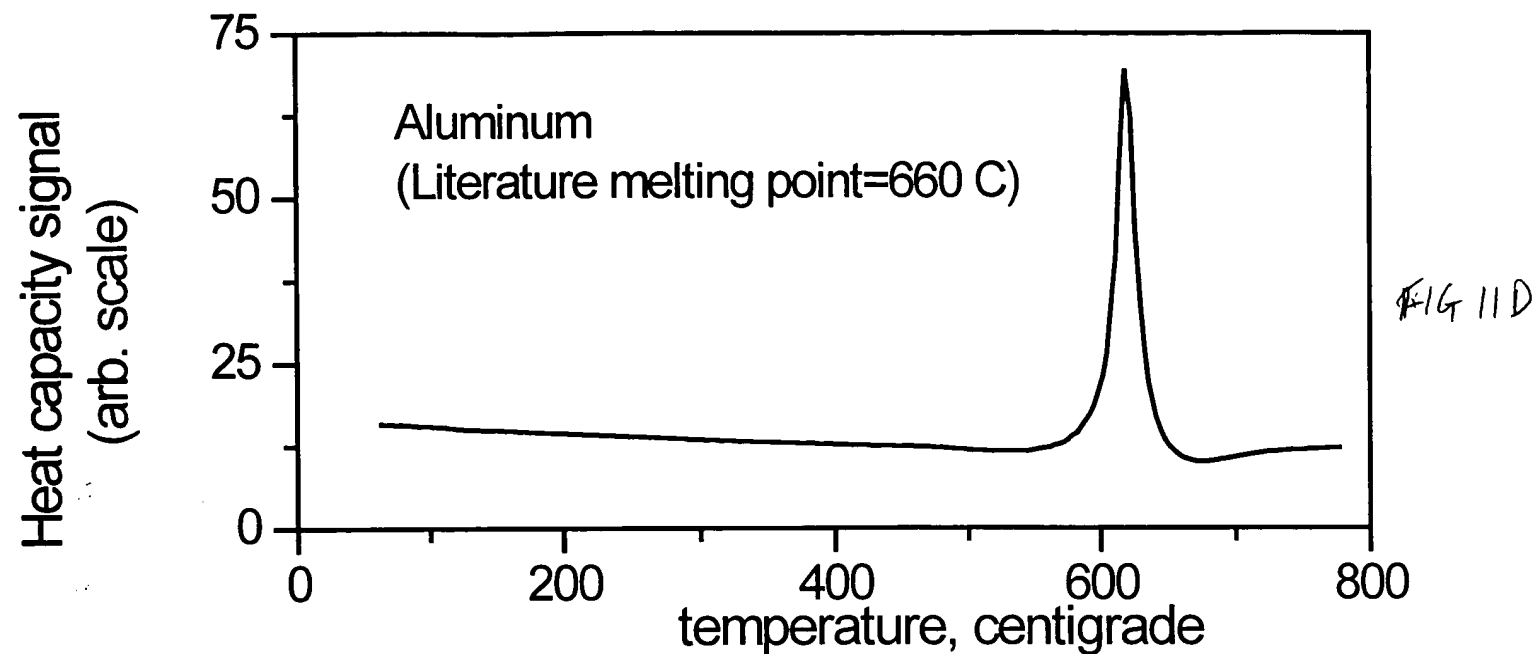
Temperature

Fig 11B



Glass transition in a thin film of
low-Tg silica solder glass

FIG 11C



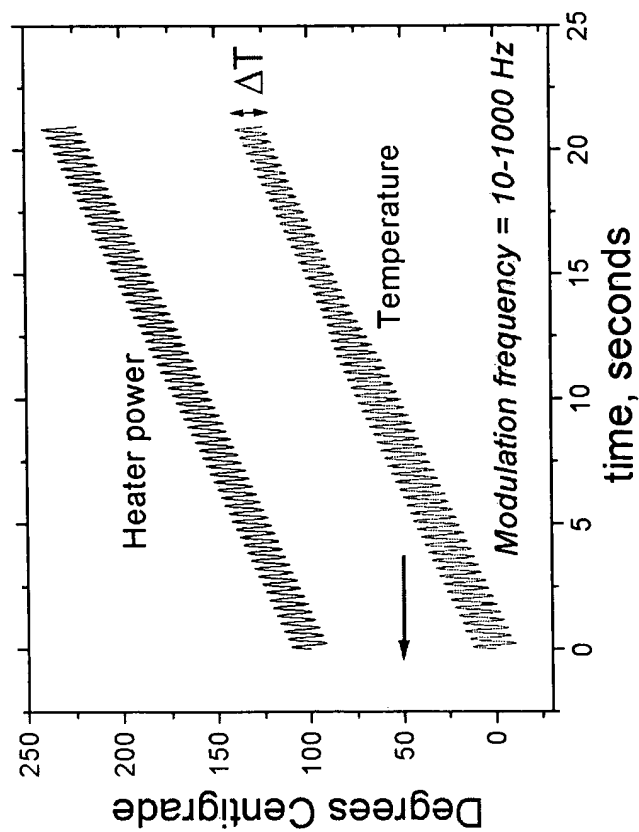


Fig 12A

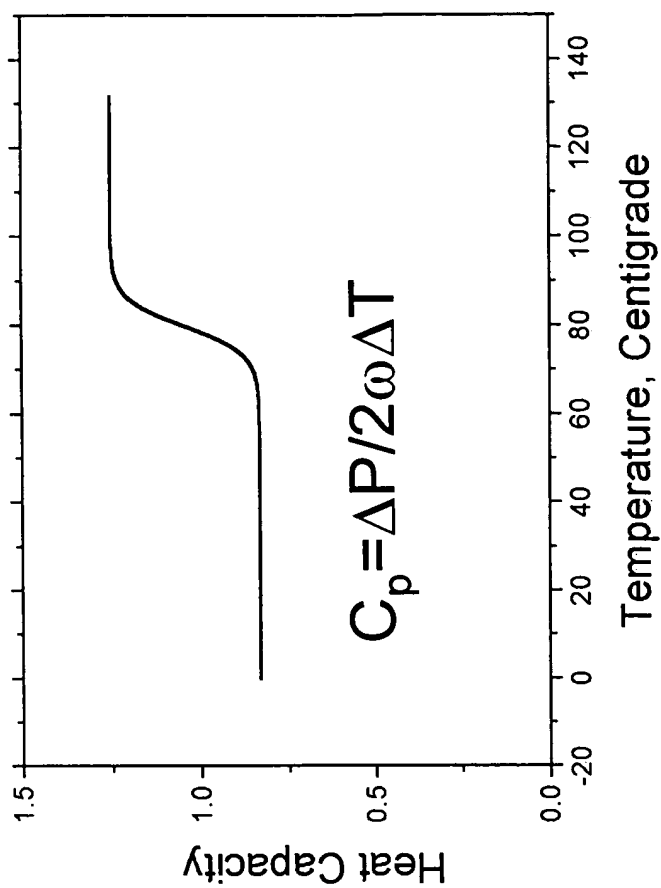


Fig 12B

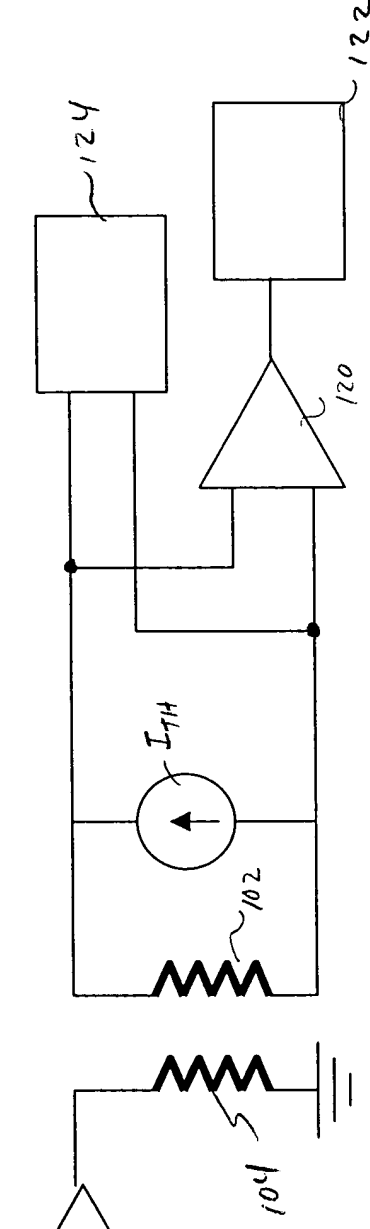
Summing
amplifier

Lockin at
frequency 2ω

DC current
source

$V_H(t)$ (ramp)

$v_H(t) = v \sin(\omega t)$



Heater thermometer

Differential
pre-amplifier
with low pass
filtering.

Analog-to-
digital
converter

Fig 12C

09240485-124198

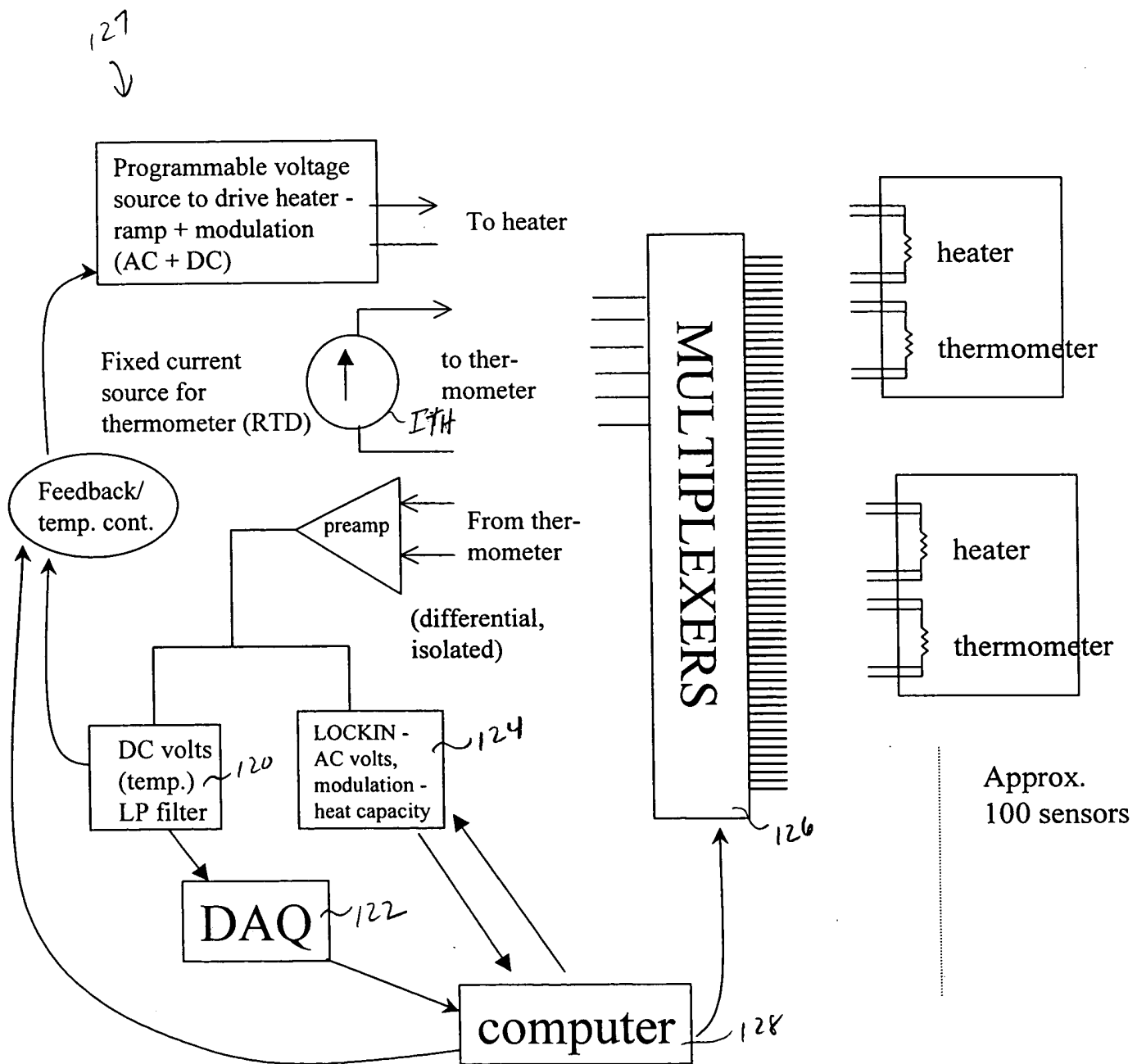


FIG 12D

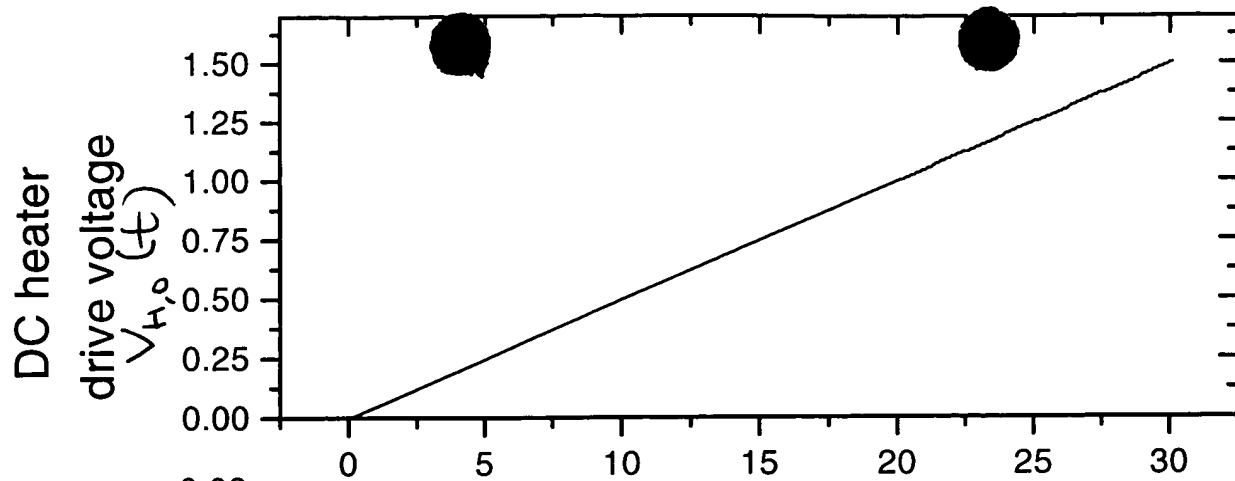


FIG 12E

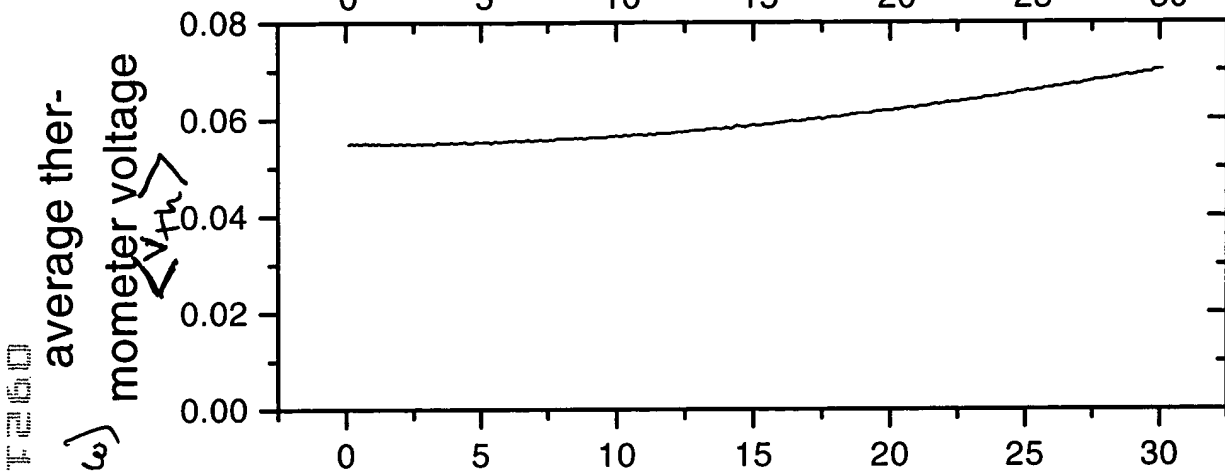


FIG 12F

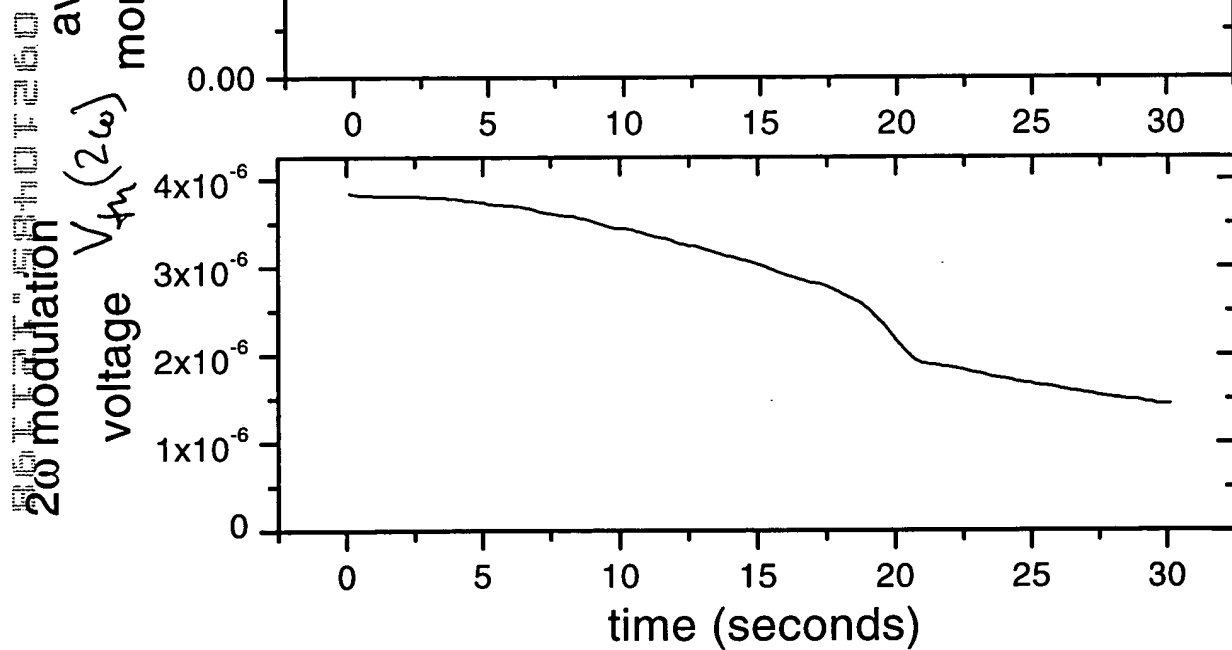


FIG 12G

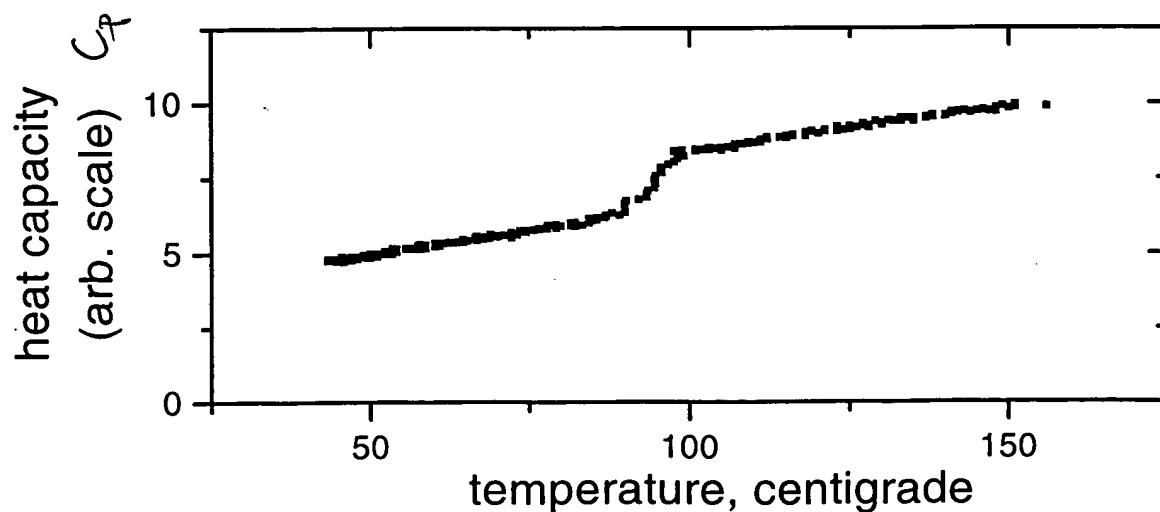


FIG 12H

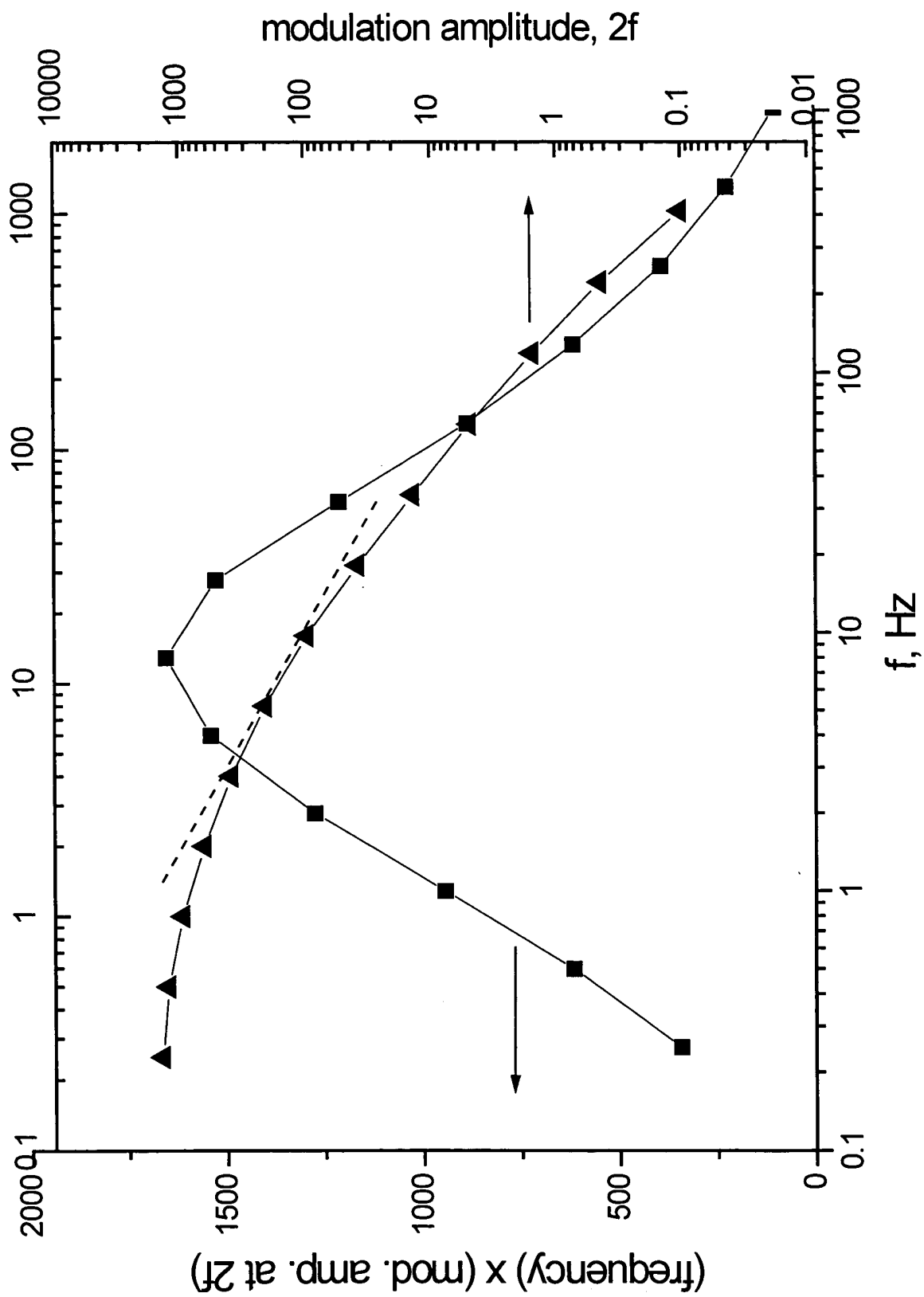


FIG. 12 I

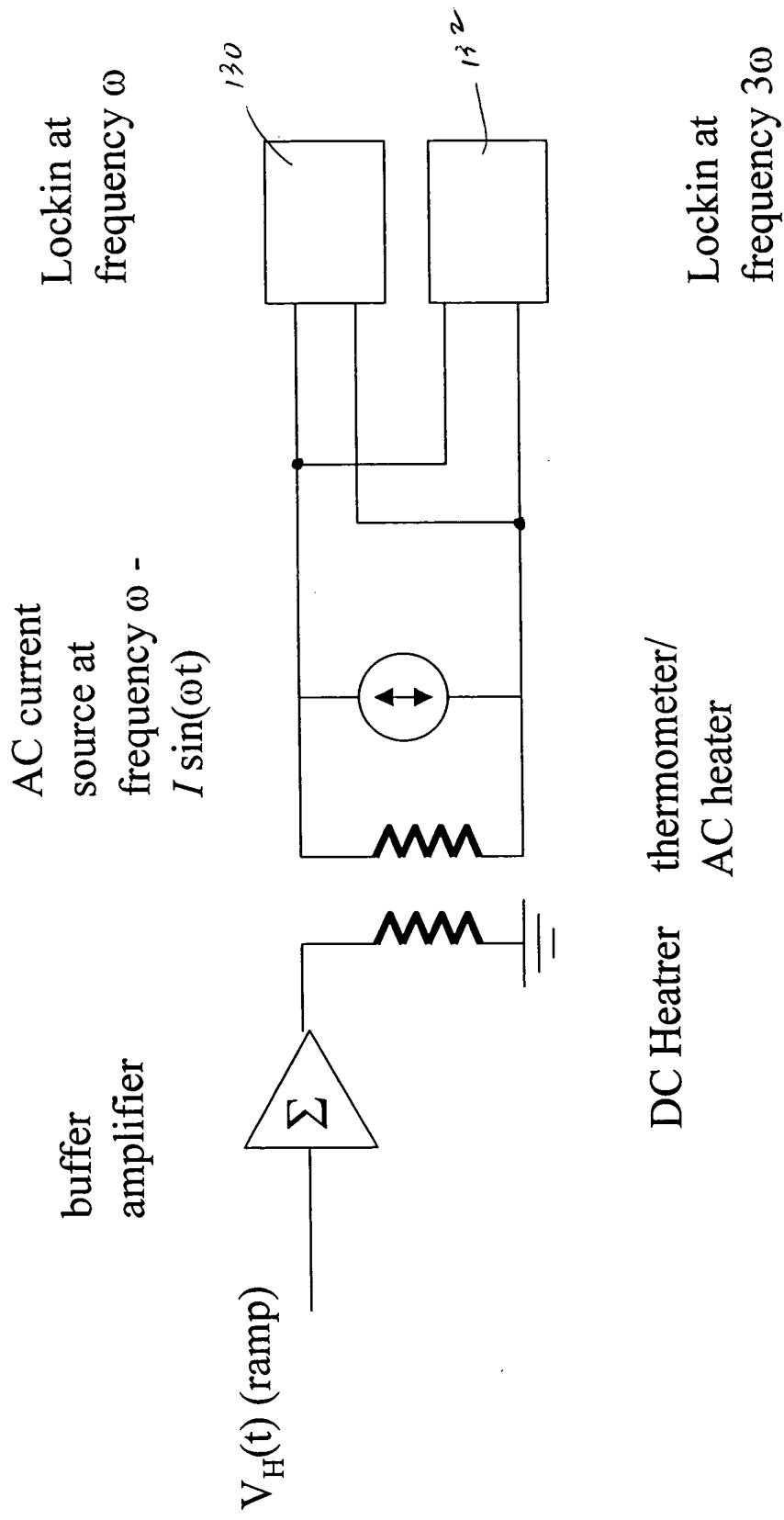
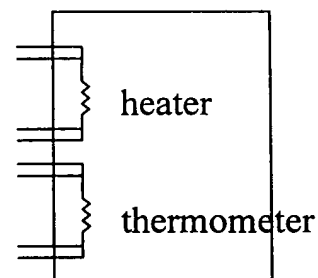
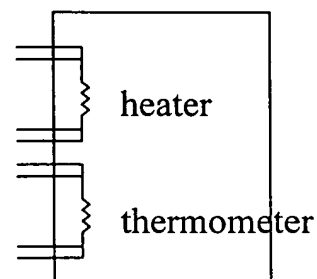
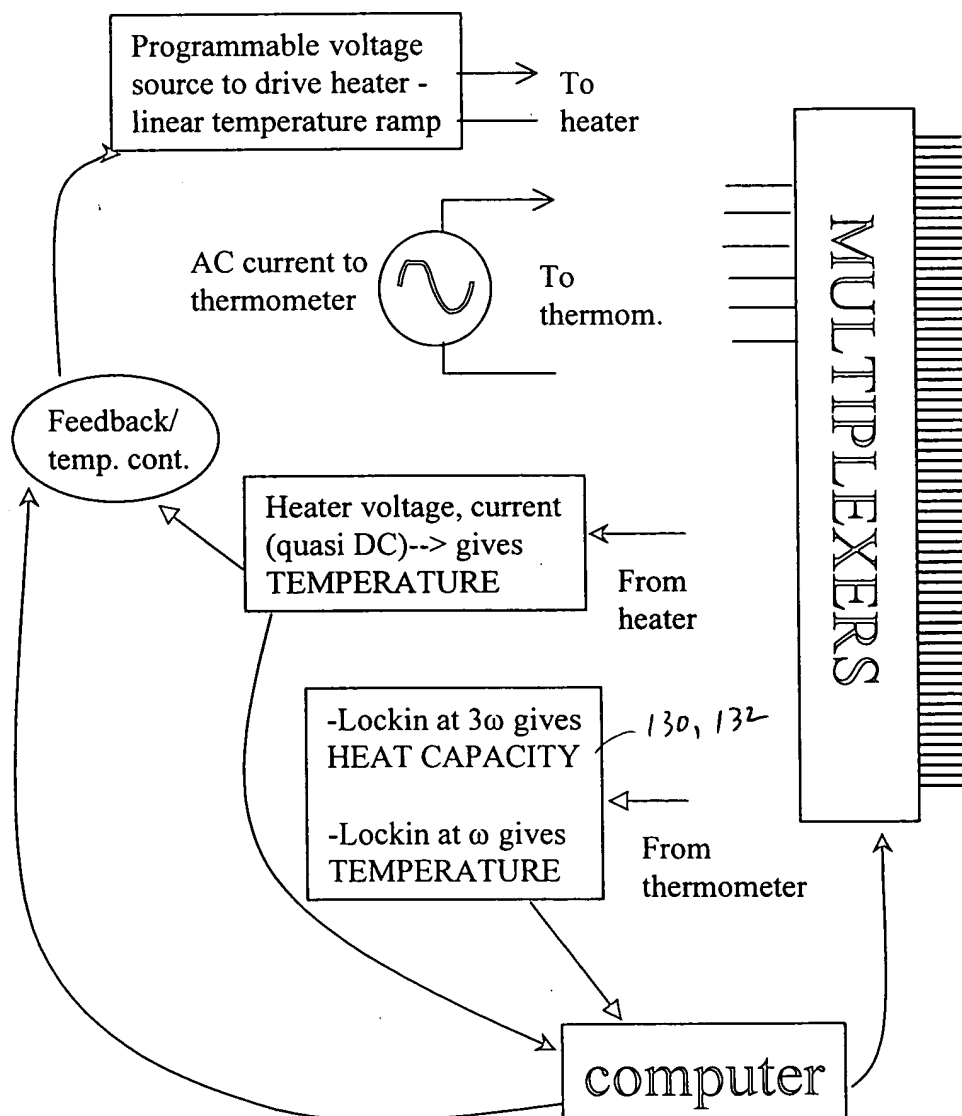


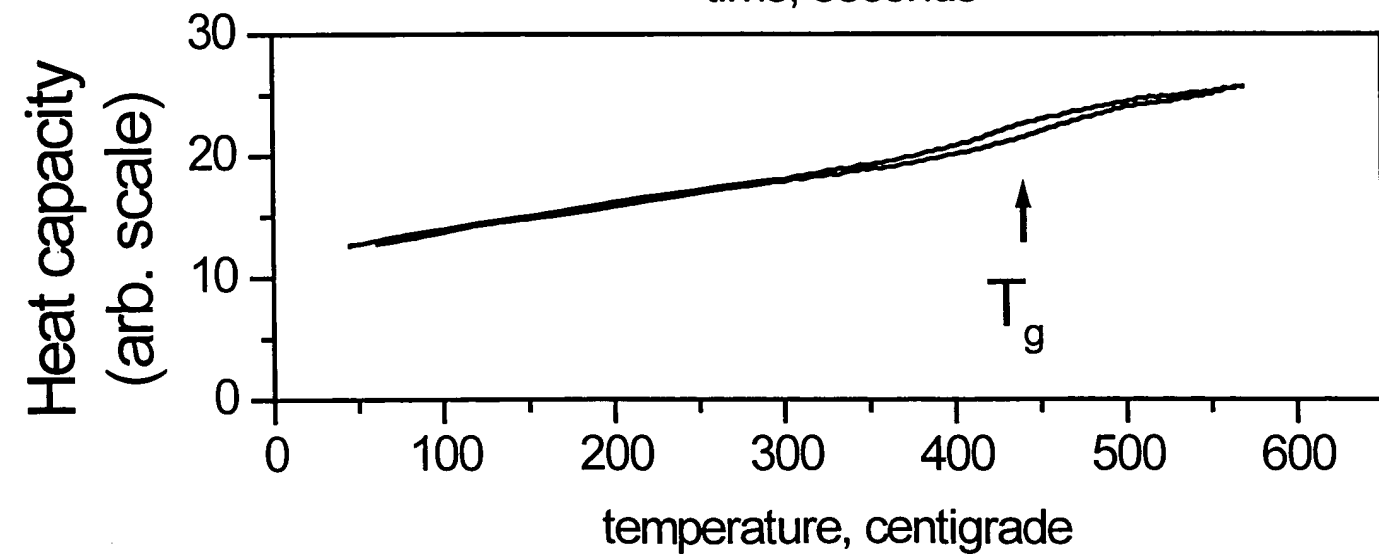
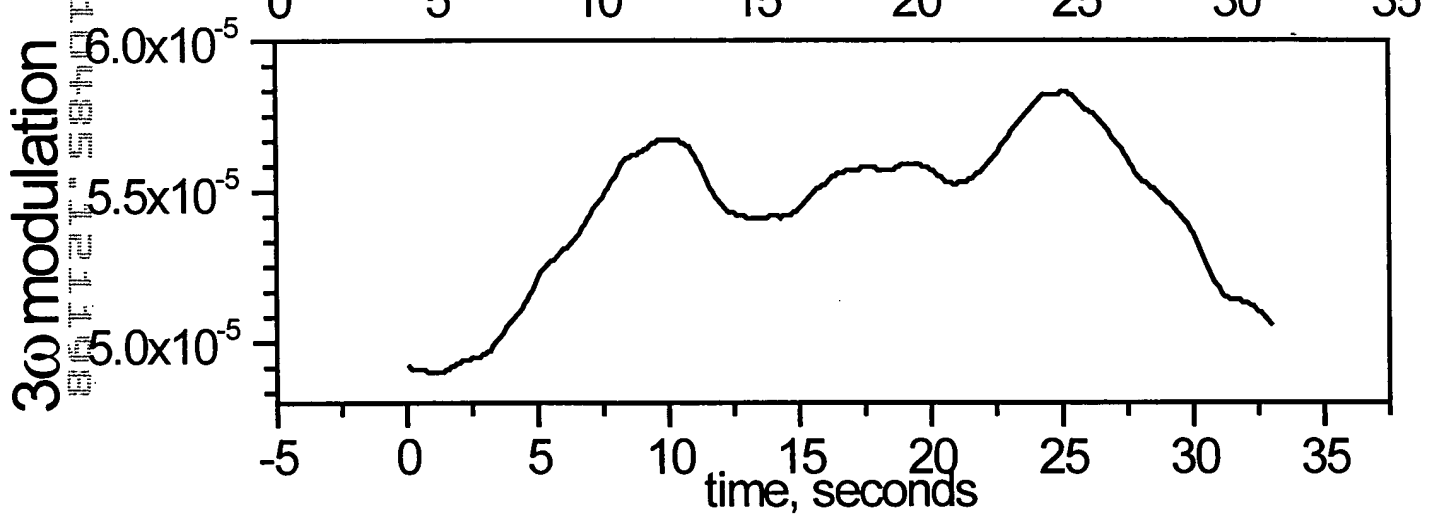
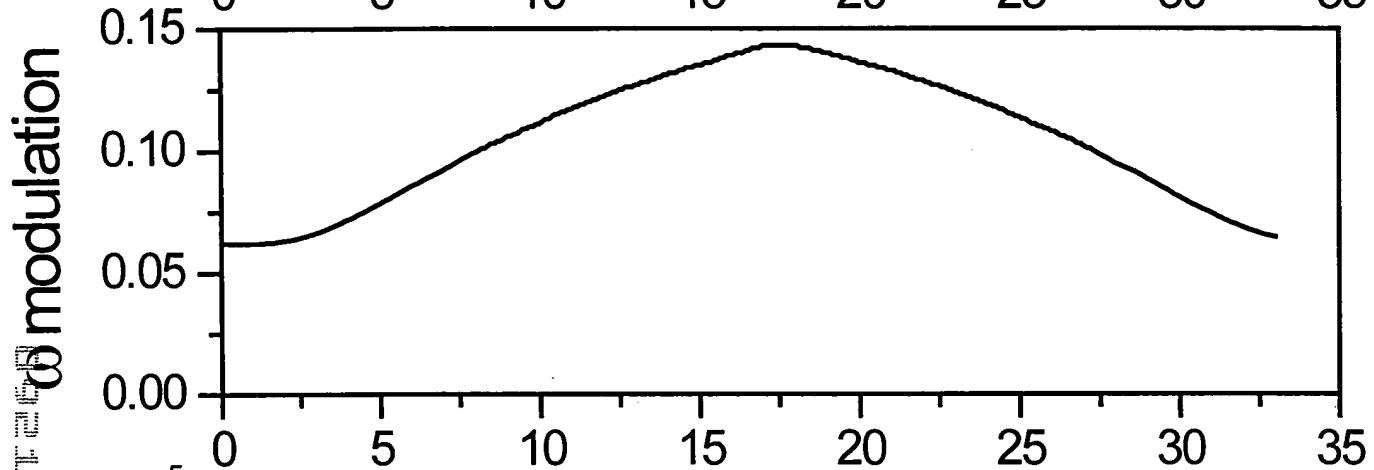
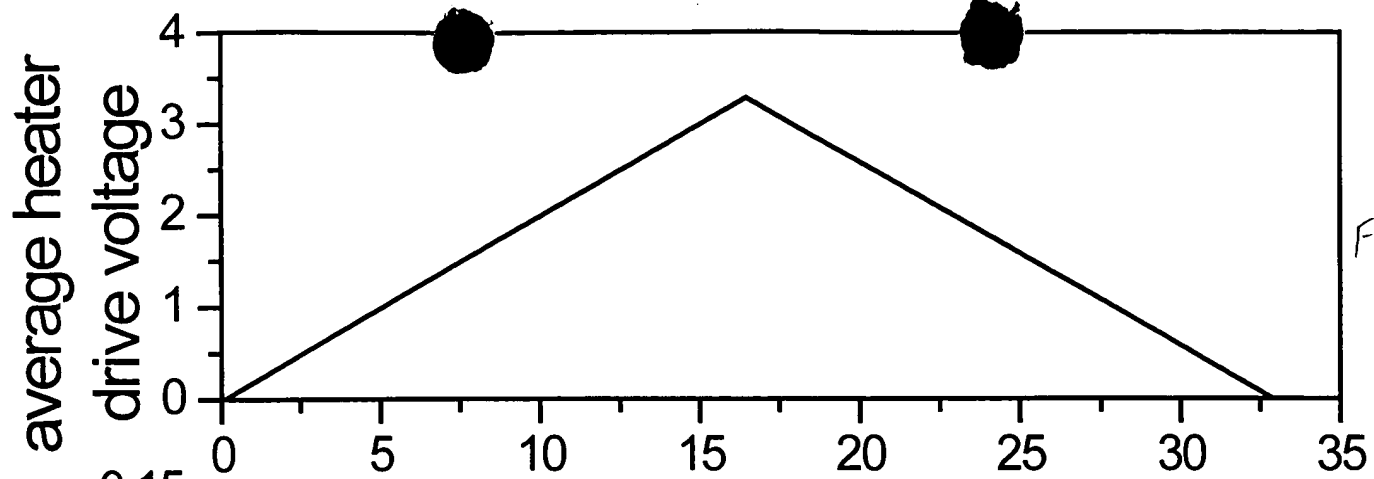
FIG 13A

09210405-121193



Approx.
100 sensors

FIG 13B



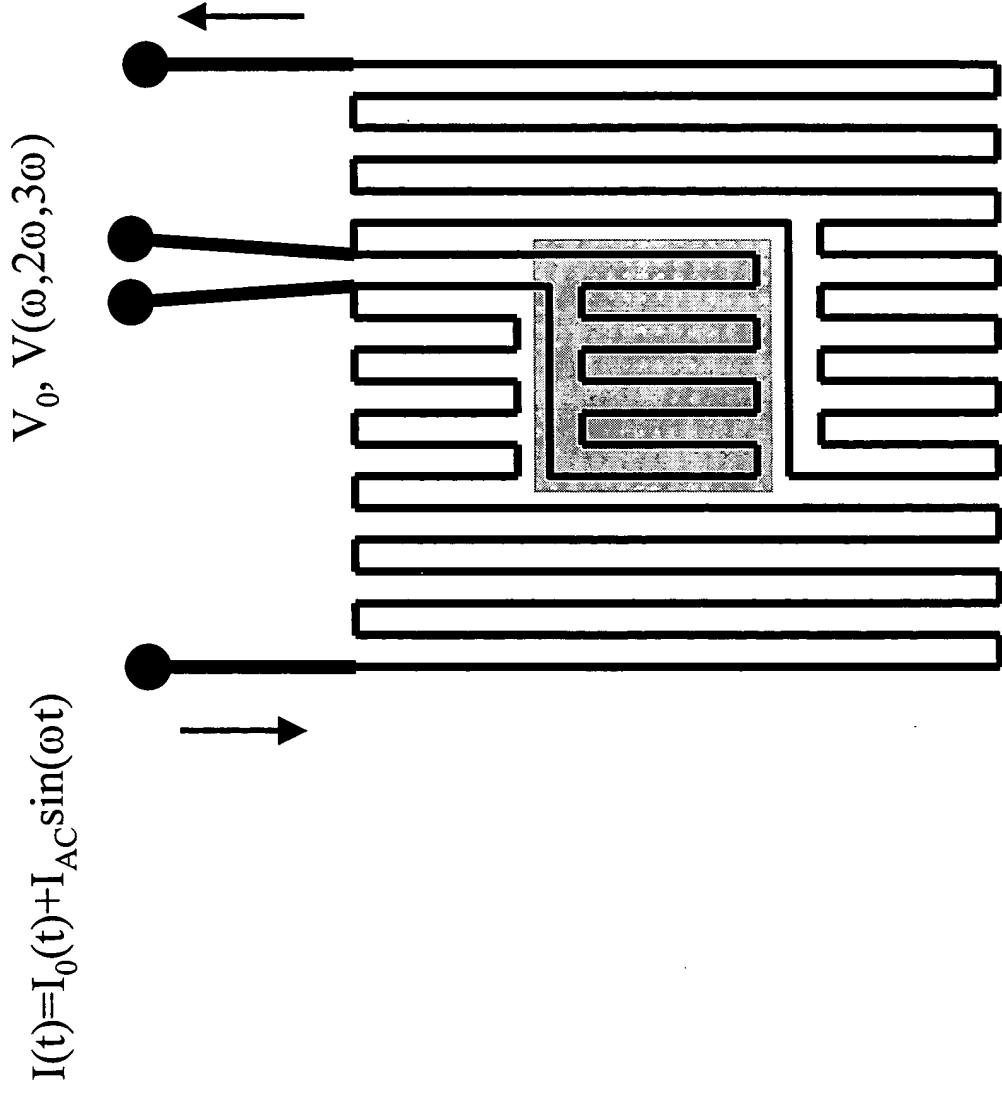
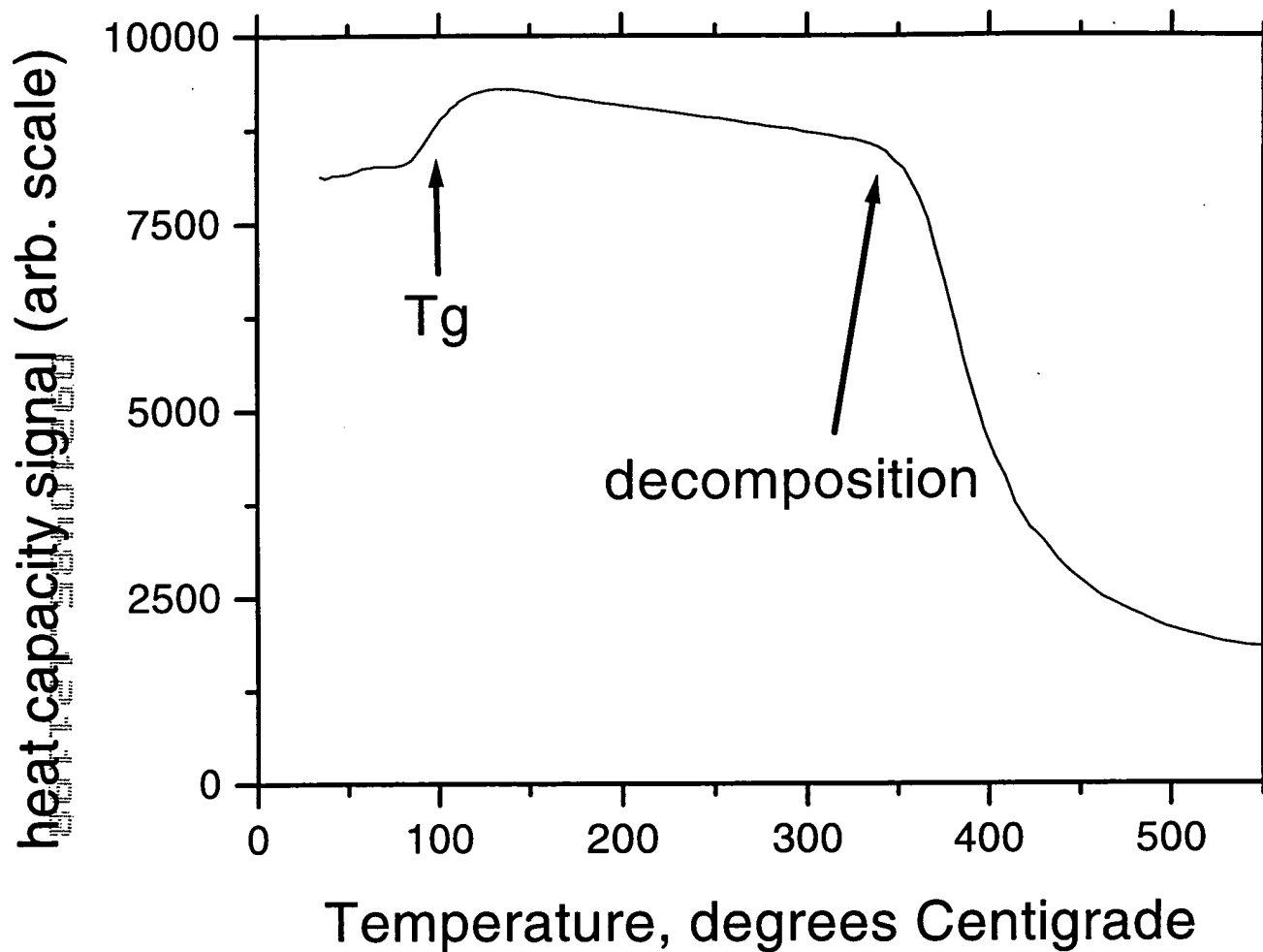


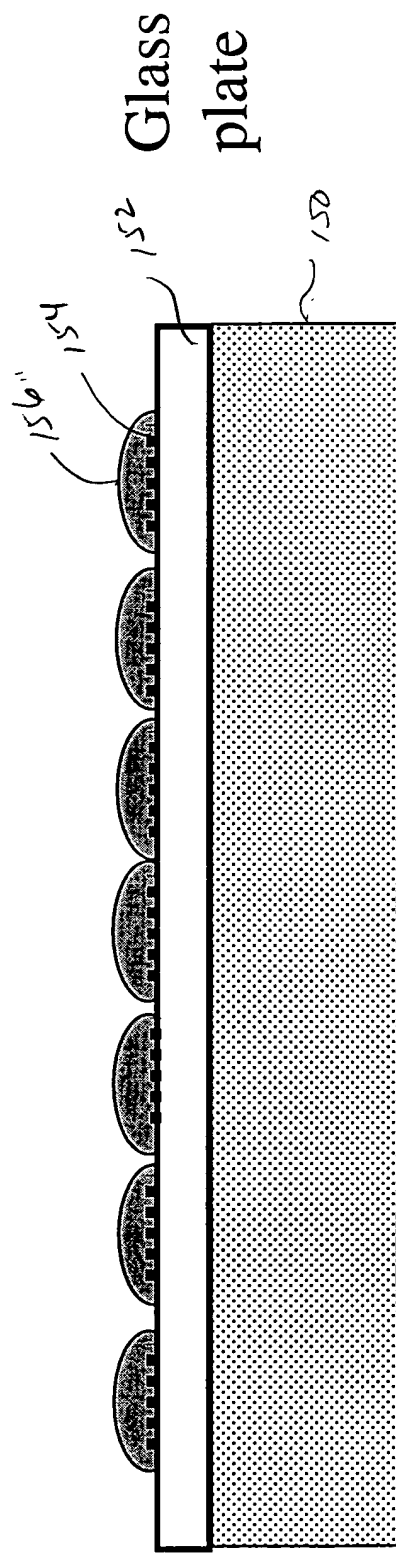
FIGURE 136



Detection of glass transition and
thermal decomposition of a polymer film

FIG 14

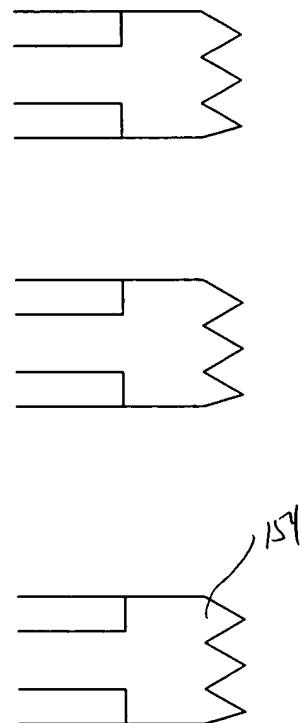
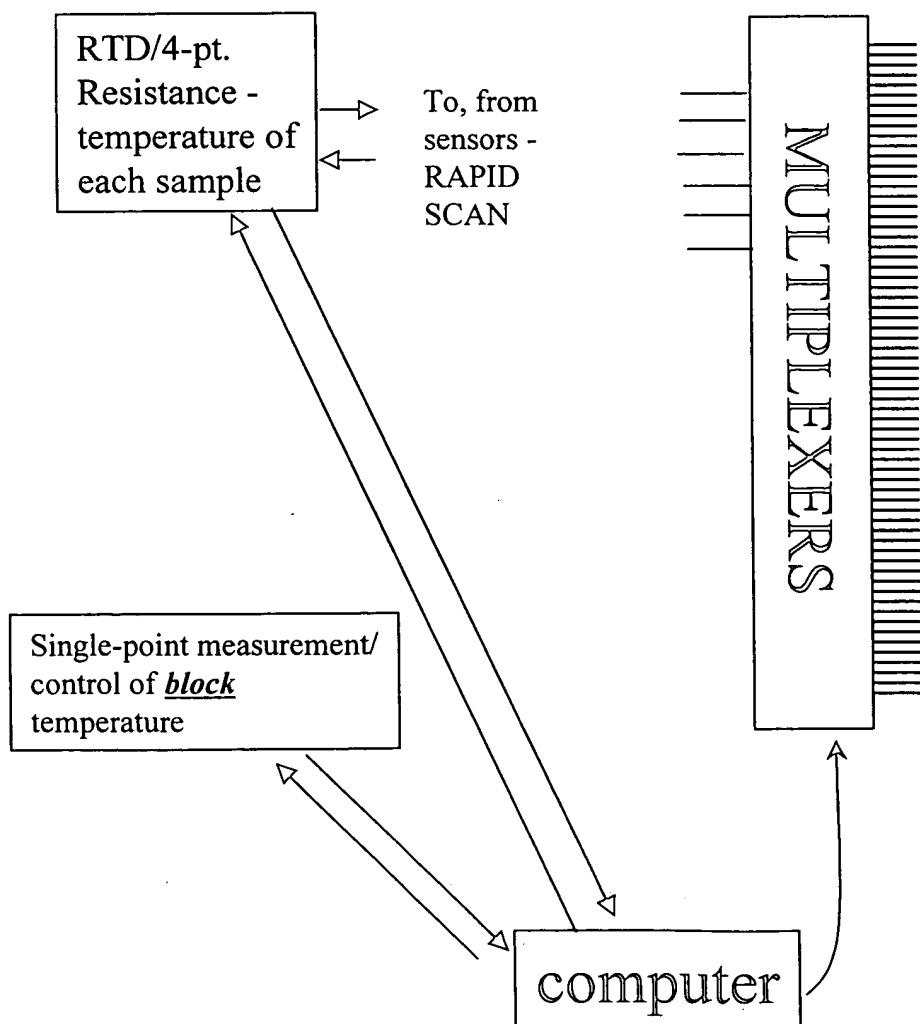
Sensors/samples at temperatures T_{ij}



Block at temperature T₀

FIG 15A

092404B5-12119B



100
sensors

FIG 15B

- Temperature/exotherm
- Dielectric spectroscopy

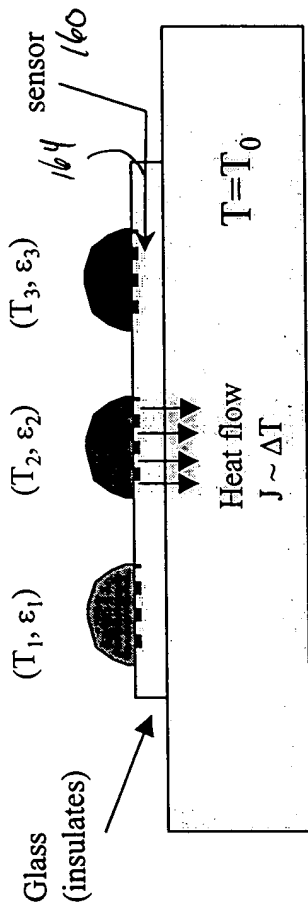


Fig 16A

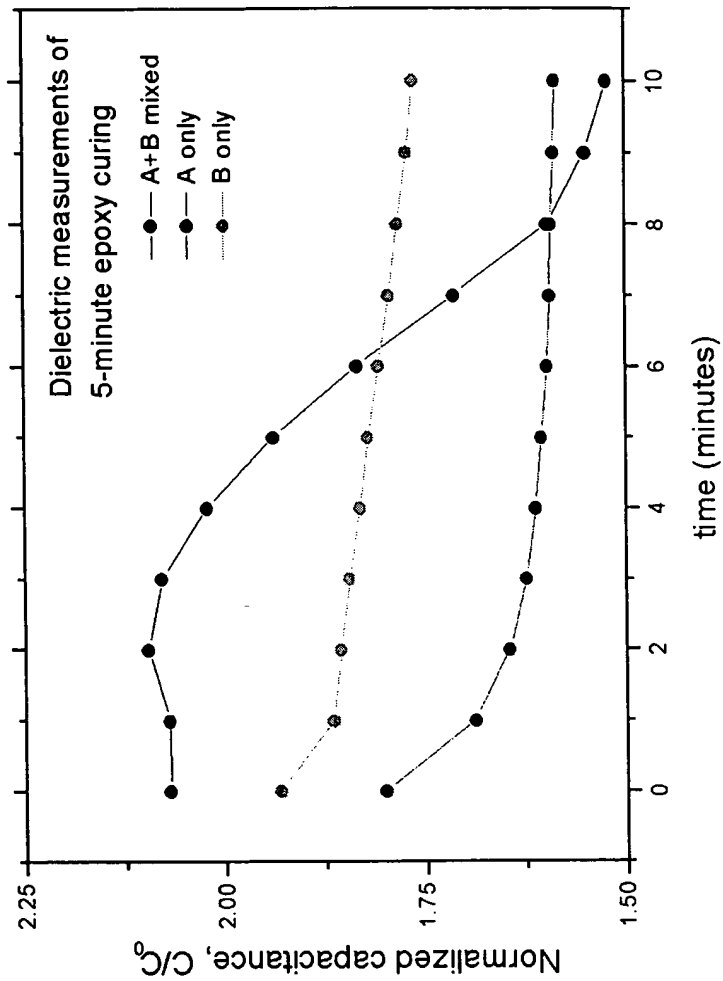


Fig 16B

FIG. 16C

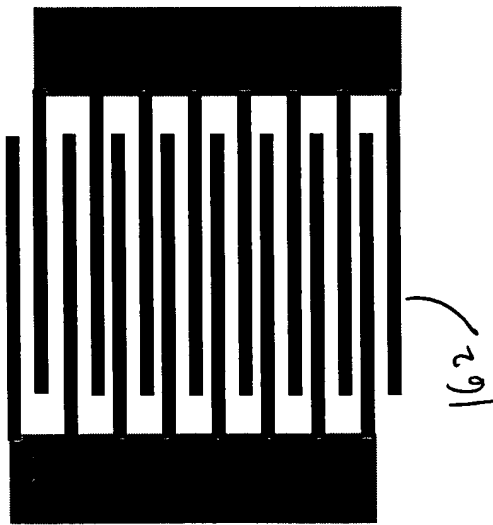
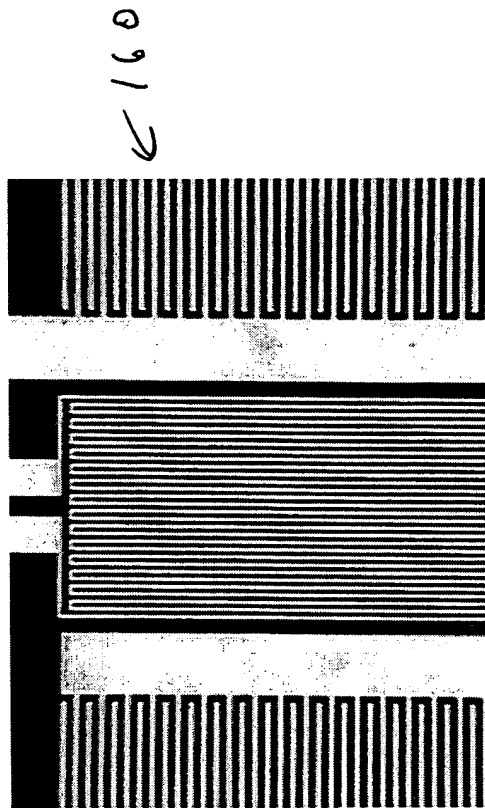


FIG. 16D



09210435-121198

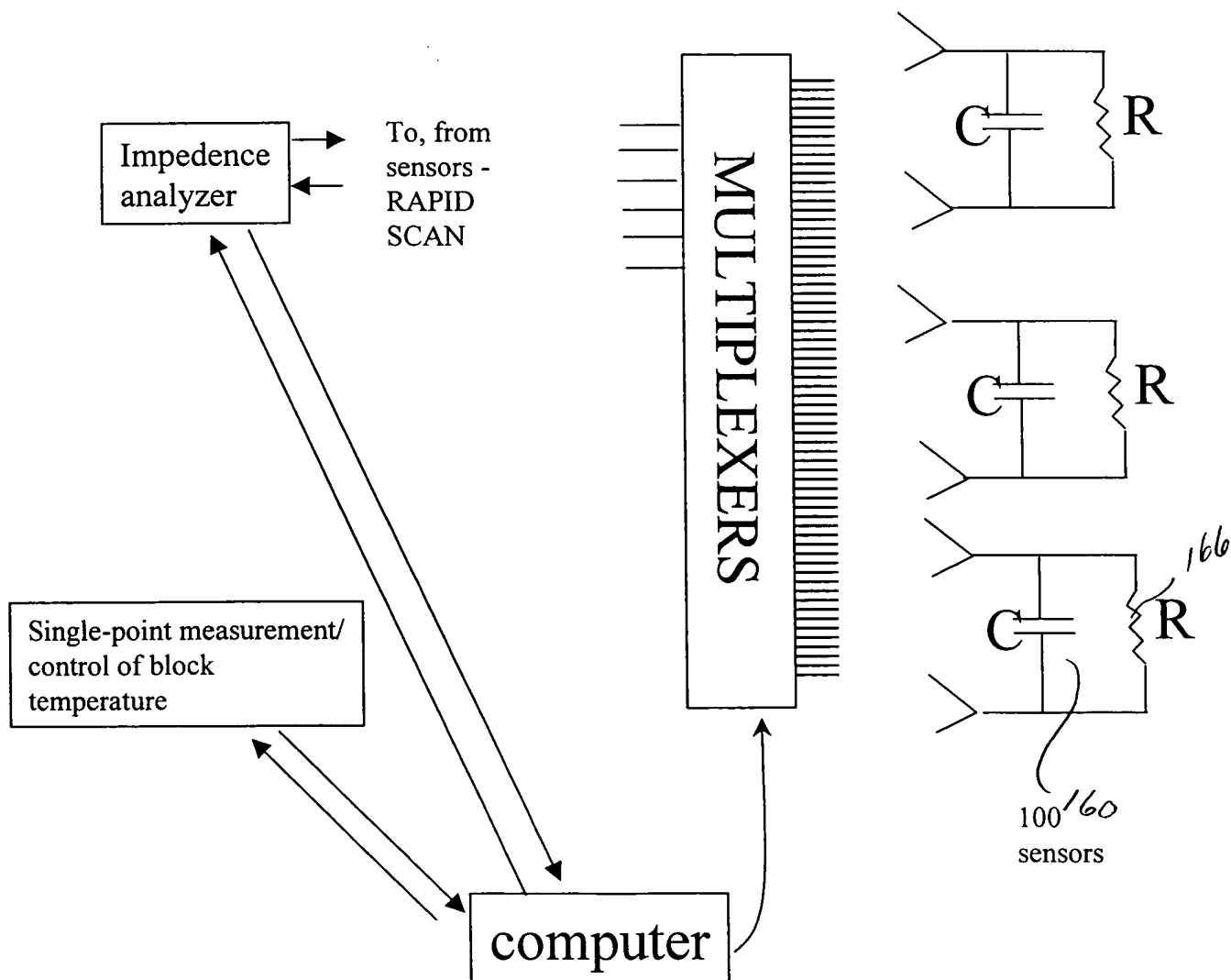


FIG 16E

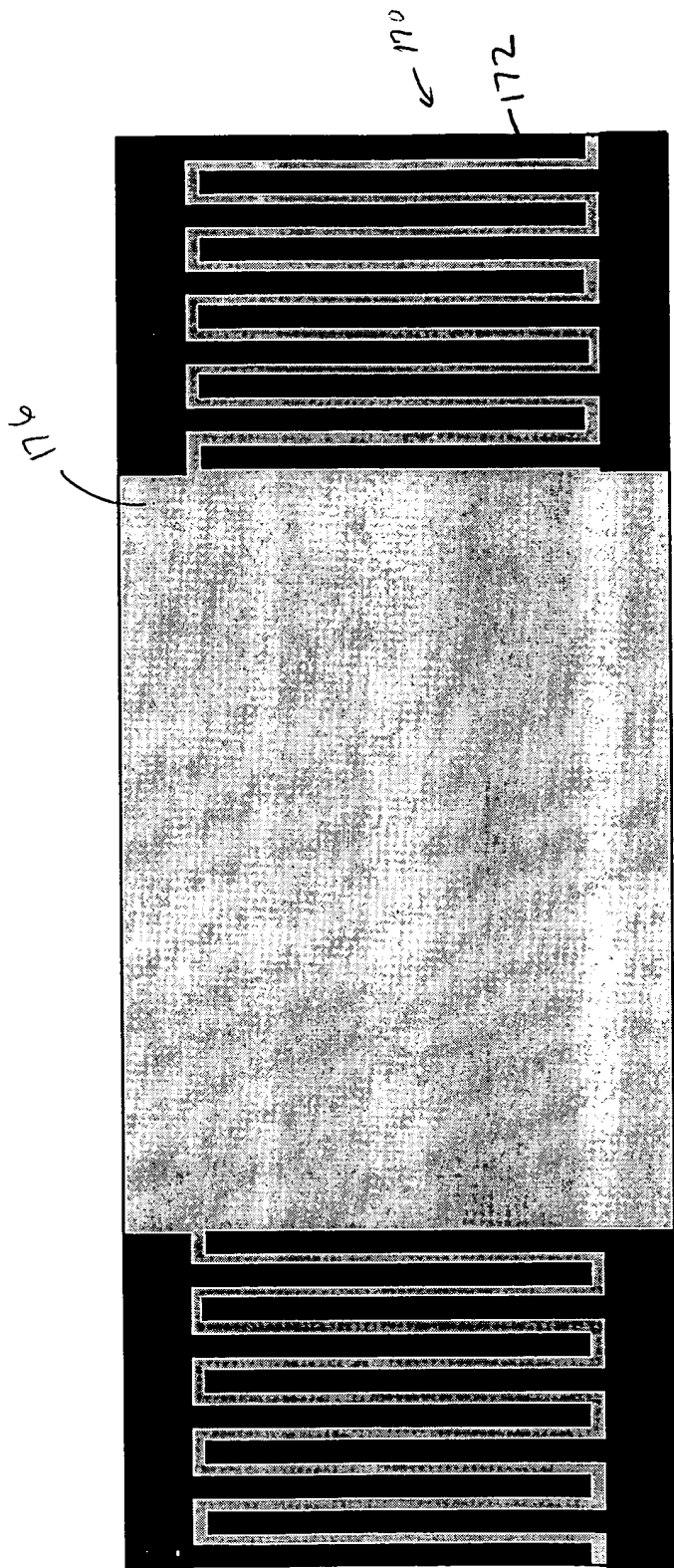


FIG 17A

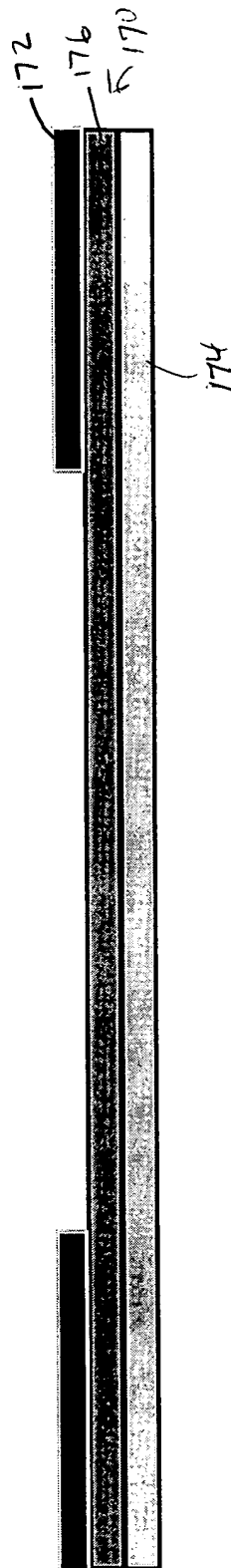


FIG 17B

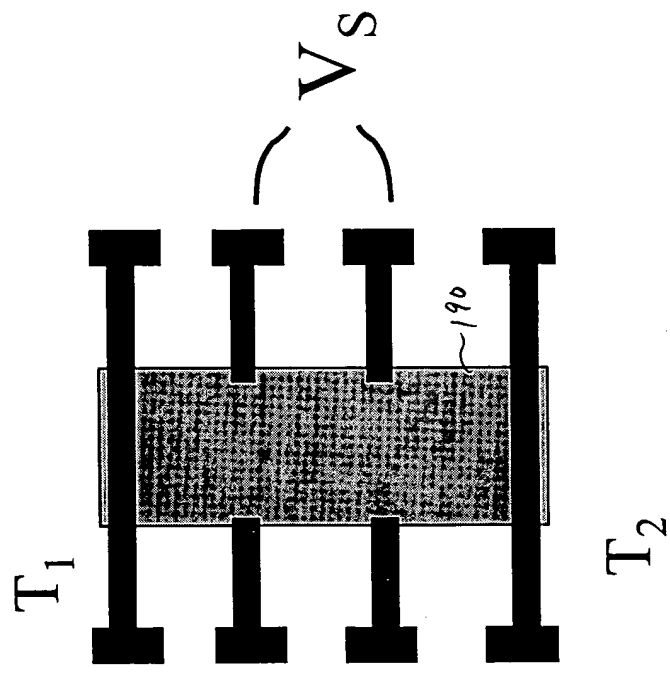


FIG 19A

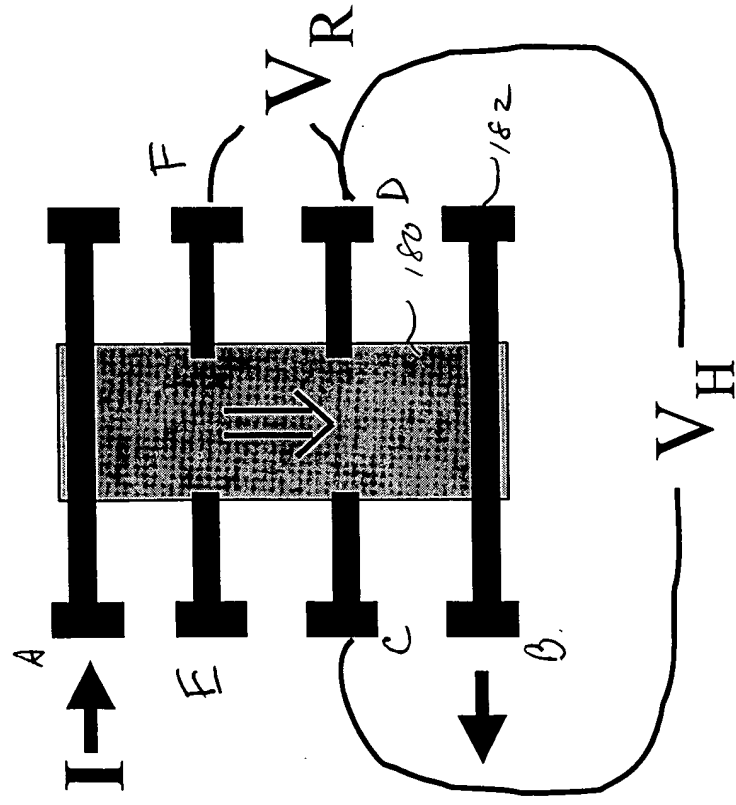


FIG 18A

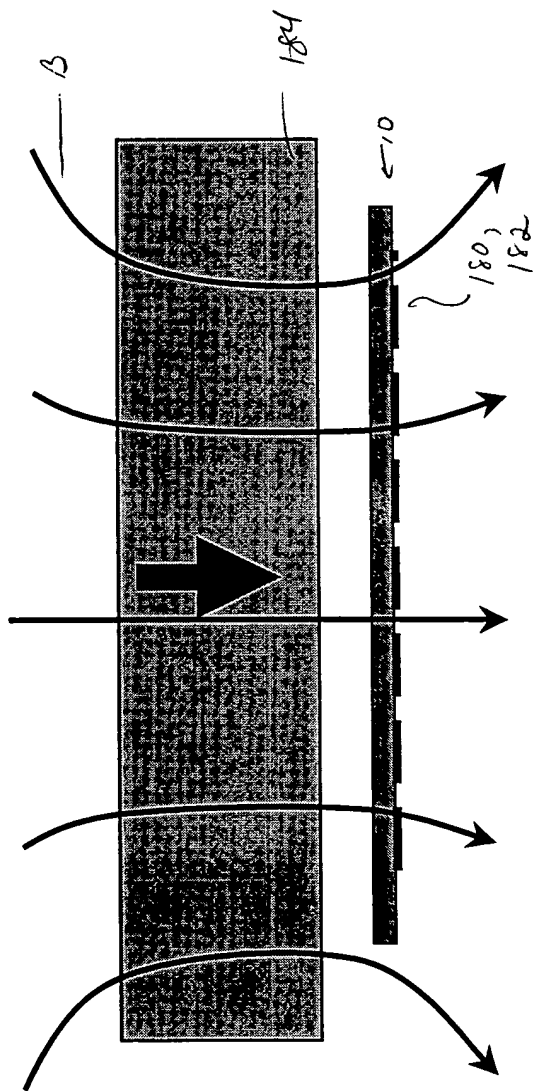


FIG 18B

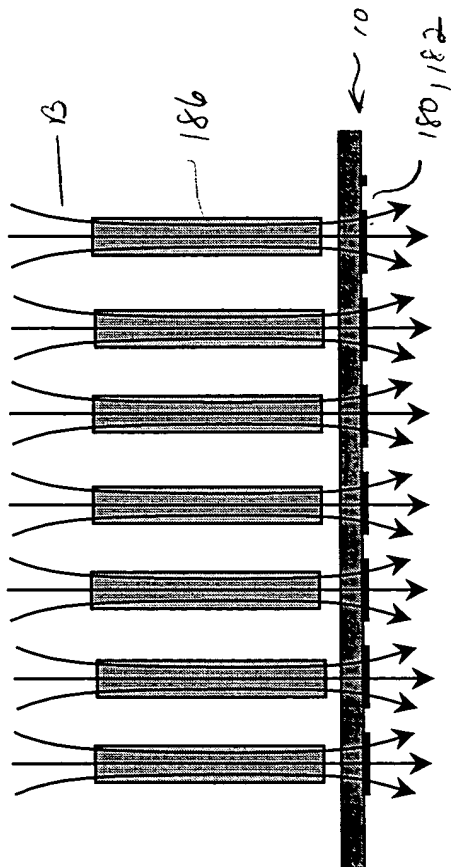


FIG 18C

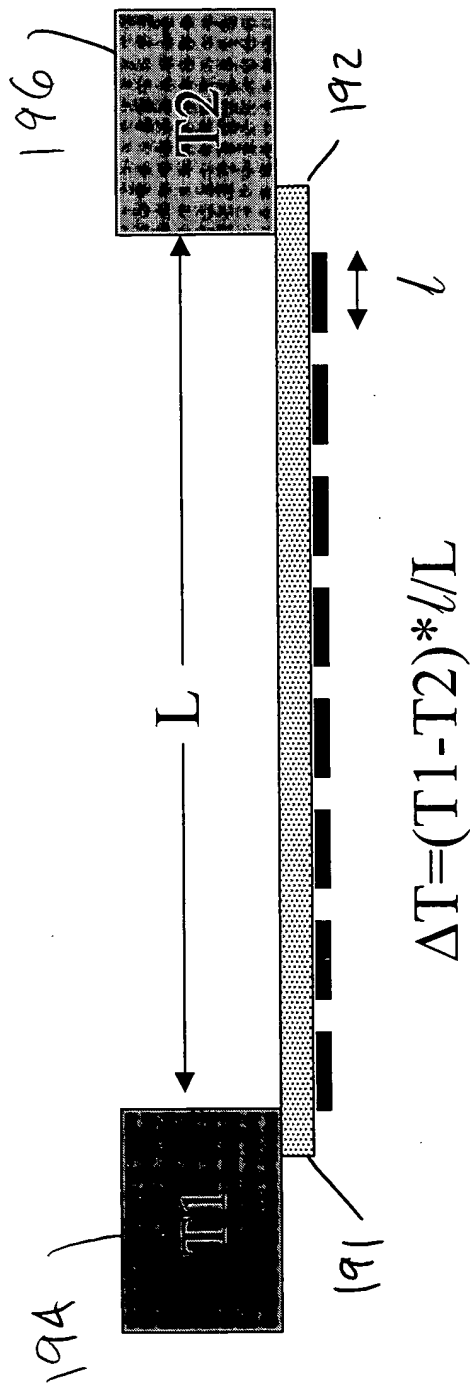


FIG. 19B

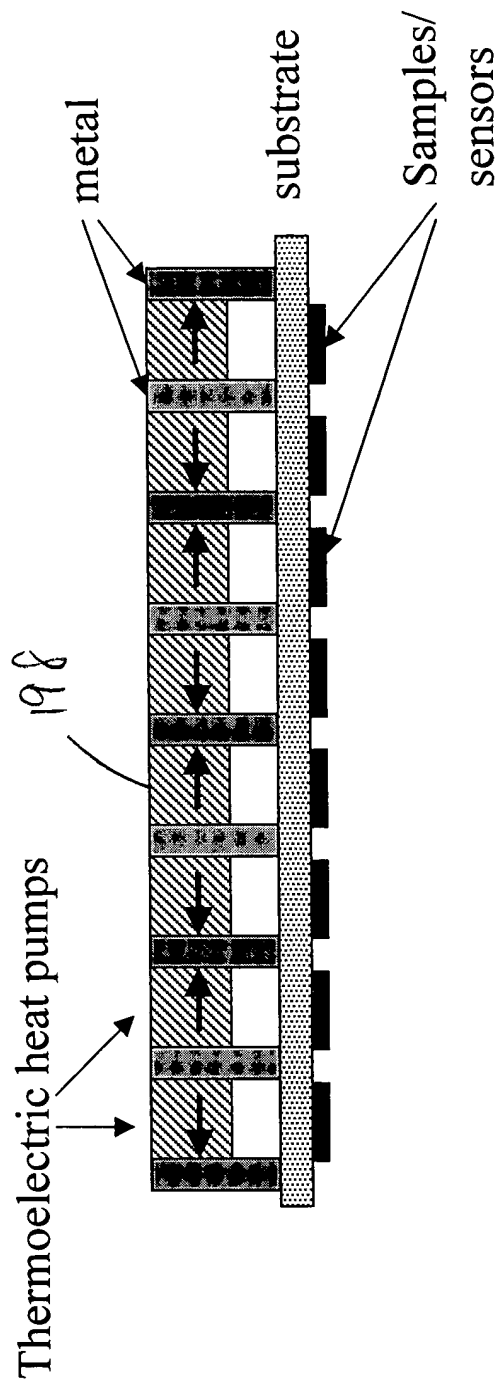
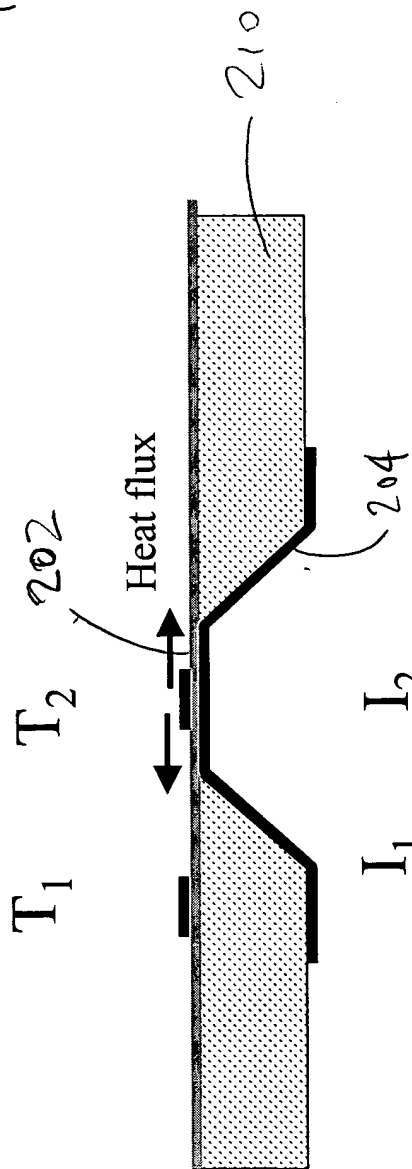


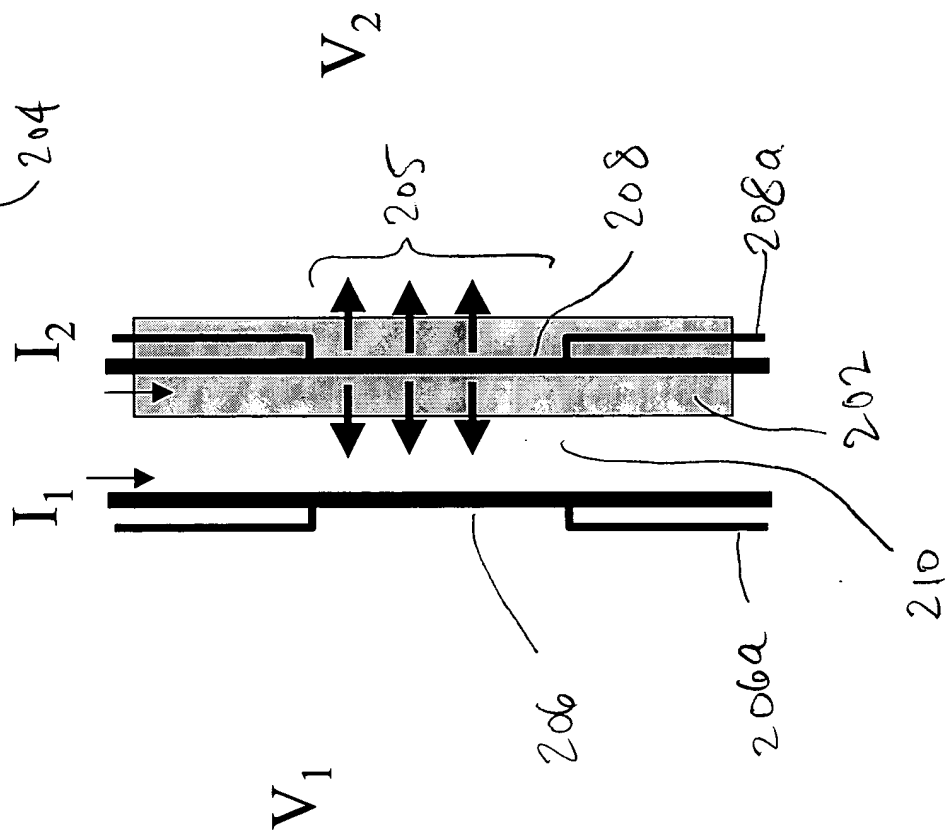
FIG. 19C

Note - electrical contacts to sensors not shown.

Fig. 20A



Feb. 20B



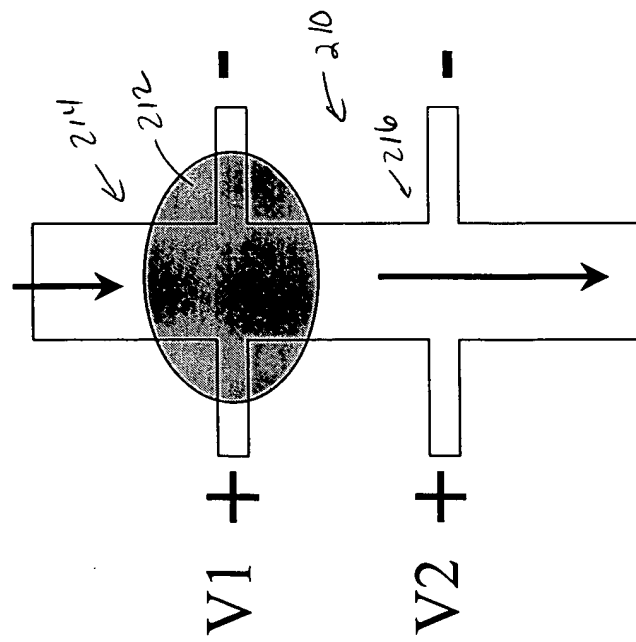


FIG. 21A

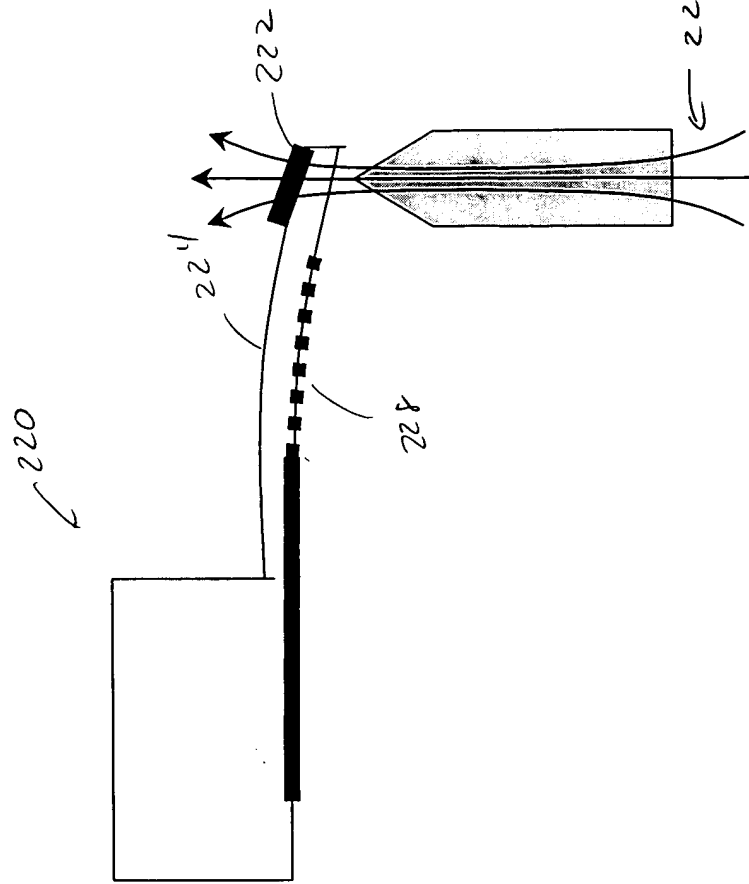


FIG. 21B